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ORIGINAL ARTICLES.

SUICIDE BY BLOWS AGAINST THE HEAD.

A Medico-Legal Study.[1]

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Although suicide, accomplished by blows against the head of such severity as to wound the contents of the cranium, is of very rare occurrence, it has been observed in a certain number of cases. Such self-murder requires more than ordinary energy, or insensibility to pain, for its execution, and these conditions chiefly obtain among the insane. There are recorded in medical literature a few instances in which the object was attained by blows on the head with a hammer or hatchet, or by driving within the skull a chisel or similar instrument. Certain of these cases, too, consist of persons who have tried to end their existence by other methods, less revolting, and have failed. Death from the self-inflicted wounds, or secondarily from the inflammation consequent upon them, as a rule, has been the final result. In the following paper I purpose to give as complete a series as I can, of cases illustrative of the remarks above, and to narrate more *in extenso* the history of a patient that came under my own observation.

The first case to be related is that of Dr. L. Langer.[1] A poacher, 37 years old, attempted suicide by beating his head with a sharp angle of an ax. There were found on the forehead, between the frontal eminences and extending into the hair, three wounds filled with crushed and splintered bone. The middle one was about two inches long, and showed at its bottom a half-inch fissure in the bone. There was also a Y-shaped wound above and behind the right ear, extending to the bone, a similar one just above, and a large swelling just below the occipital protuberance. The man recovered in two months.

Fourmet[2] relates a noteworthy case: A joiner had driven an iron chisel 3½ inches long and 3 lines broad up to its head by means of repeated blows from a hammer, into his cranium about the middle line. The patient became comatose, but, on the removal of the chisel in about seven hours, recovered within two weeks.

A remarkable case was published by Angenstein.[3] J. M., convicted of repeated arson and sentenced to imprisonment for life, was reported to have simulated epilepsy and insanity, and to have made suicidal attempts by inflicting superficial wounds on his neck and arms. In October, 1859, he drove two nails, 1½ inches long, into his frontal bone: these were with difficulty extracted by the forceps. In April, 1860, a similar attempt was made in the left parietal bone. He quickly recovered from the effects of each attempt. In September, 1860, he introduced under the skull a piece of wire. Signs of brain irritation followed this last wound, and a week later death ensued. The autopsy showed the dura firmly united to the skull at the place of the last injury, and the perforations through which the nails had been driven closed by membrane. There was purulent meningitis that had been caused by four needles that were found sticking into the meninges and brain. These needles had been introduced through the openings made by the nails.

A case presenting much analogy to the above is narrated by Dr. V. Biart.[4] It was that of a convict in the Kansas State Penitentiary, who attracted much attention among his fellow-convicts by boring a hole in his skull with an awl, and introducing therein pieces of wire. The physician-in-charge removed several pieces that had pierced both cerebral hemispheres. The wound of entrance was situated in the right parietal bone, near its posterior inferior angle. The patient stated at the time that he had passed other substances into his brain. Later he committed suicide by taking morphia; and at the autopsy his brain was found congested, and a wire three inches long and three-sixteenths of an inch thick was found running from the wound of entrance to the fissure of Sylvius. A flat nail one and three-fifths inches long was also found lying near the wire.

Carpenter[5] relates a similar case of an insane patient who sought in the following ways to take his life: First, he bored through his skull just above the right ear, and passed a heavy wire four and three-quarters inches into the brain. Second, he thrust an awl into the vertex. Third, through the first opening he pushed another wire to the opposite side of the skull, causing a left-sided hemiplegia that lasted fourteen days. Finally, after some months, he poisoned himself with morphia. At the autopsy a piece of wire two inches long and a threaded needle were found lying near each other in the middle lobe of the

[1] Read before the Julien Medical and Surgical Association, Dubuque.
[1] Wiener Med. Wochenschrift, 1878, No. 37, p. 999.
[2] Wiener Med. Wochenschrift (R. Frank) 1885, No. 15, p. 454.
[3] Ibid.
[4] Agnew's Surgery, vol. i, p. 294.
[5] Wiener Med. Wochenschrift, No. 15, p. 457.

right hemisphere, and in the frontal lobe were discovered a piece of wire two and one-half inches long, and a long headless nail.

Schauenstein[6] relates the case of a laborer who gave himself seventeen blows on the forehead and vertex with a hatchet, some of which penetrated the skull. Death from meningitis followed.

J. Fritsch[7] reports the case of a drunkard who cut down his child with a hatchet, wounded his wife dangerously and also struck himself several blows in the neighborhood of the right frontal eminence, in consequence of which he fell senseless. The wound healed perfectly.

Albert[8] gives the case of a joiner 32 years old, who struck himself in the right temporal region with a hammer. A large wound resulted. Patient became unconscious, tongue was deflected to the right. The next day there was return of consciousness, and in two months cicatrization of the wound.

Fabrice[9] reports the following case: A man who suffered much from headache dealt himself severe blows on the head with an ax, split his lower lip, wounded his throat, cut off a testicle, and on his recovery could not tell what impelled him to the act.

Zaggl[10] reports the case of a patient *in puerperio*, who attempted to suicide with a meat ax. There was contusion of the scalp on the vertex, with a stellate fracture and a bruised wound on the right parietal eminence.

E. von Hofmann.[11] A woman first stabbed herself in the liver, and as death did not ensue seized a hatchet and struck herself so many blows on the forehead and vertex, that she fell back senseless. When she was brought into the hospital, consciousness had returned; linear cuts with contusions of the scalp were found. Much suppuration followed, and the patient died of pyæmia. The autopsy revealed that the outer table of the vertex had been penetrated by the cutting edge of the hatchet.

Krugelstein[12] reports that a skeleton of a person who had run away from fear of punishment, was found in a wood. On the vertex was a wound evidently made by a hatchet that was lying near by.

Casper Liman:[13] A laborer long afflicted with melancholia, struck himself such heavy blows on the head with a flax-beater, that he died of their effects in a few hours.

Otto[14] reports the case of a jealous butcher, who first struck his head violently against a wall, then beat his head with an ax so long and heavily that he sank back senseless. Death from hæmorrhage resulted. The autopsy showed a hole in the frontal bone one inch long and two inches broad, with several depressions about it.

Maschka:[15] A woman 63 years old stabbed herself in the abdomen with a knife, then beat herself heavily on the head with an ax, and finally attempted to open the veins in the elbow. She died in six days from meningitis. The post-mortem examination showed a large fracture on the right side of the frontal bone.

Riambault[16] reports the following case: A man 53 years old, among whose relations were sixteen insane, and who suffered from severe headaches, was found hung in a barn. He had first cut his scalp with a pocket knife, then dealt himself heavy blows on the head with a hatchet, and finally hung himself. There were found, at the autopsy, a large fracture at the juncture of the parietal and frontal bones, and nine parallel incised wounds of the scalp.

Kupfer[17] reports the case of a man, 40 years of age, who was found drowned in the Spree. There was a history of overwork and anxiety, and a slight temporary mental aberration. There were found above and behind the right ear thirteen parallel wounds of the integument, some of which reached the bone. Over the left ear were many wounds with a large loss of substance, seventeen incisions being counted posteriorly, fourteen anteriorly. The bone was much splintered and fissured.

Krugelstein[18] records the following: On the head of a woman found hung were thirty parallel wounds, one-half inch long. These were situated on the forehead and vertex and had penetrated the outer table. There were in addition some small parallel incisions in the cardiac region that, as they were suppurating, must have been three or four days old.

Von Haumeder[19] gives the case of a hostler, ill of typhoid fever, who was found hung. At the centre of the vertex was a sharp-walled hole two inches long and half an inch broad, at the bottom of which the bone was laid bare. Both hands were stained with blood. A short distance from the body lay a heavy hatchet, on which were traces of blood, and yet further off was found, near a pool of blood, a large hammer. An examination showed that there were at least sixteen blows directed against the head, seven of which penetrated the skull. There was typhus abdominalis in the ulcerative stage. The expert opinion on the case was that it was one of suicide; this opinion was founded on the facts that the wounds were of comparative insignificance from such heavy instruments, that they were parallel in their course, that they were all near each other, that there was no evidence of resistance, and that typhoid fever was present.

Howe[20] reports the case of a man who, according to the statement of his wife, first dealt her blows on her head with a pistol, then fired two shots upon her. He next attempted to blow his brains out, but as the pistol missed fire, he struck himself very violently on the head. Death from shock followed. The autopsy showed the right malar region suffused and penetrated by an incised wound one inch in length, two incised wounds in the right temporal region, nine on the vertex close together, a lacerated wound over the right ear, and one on the vertex, and a triangular cut

[6] Ibid.
[7] Ibid.
[8] Ibid.
[9] Ibid.
[10] Ibid.
[11] Lehrbuch d. gericht. Med., p. 407.
[12] Wiener Med. Wochenschrift, No. 15, p. 456.
[13] Ibid.
[14] Ibid.
[15] Ibid.
[16] Ibid.
[17] Ibid.
[18] Ibid.
[19] Wiener Med. Wochenschrift, 1882, No. 18.
[20] Boston Med. and Surg. Journal, Nov. 8, 1883, p. 433.

on the arm. The patient had previously showed signs of mental aberration.

R. Frank's[21] case: This remarkable case, together with the result of the judicial investigation into it, I will relate more fully, as the history is of much interest from a medico-legal point of view:

In the Vienna Allgemeines Krankenhaus, Surgical Section, a woman 64 years old presented herself on the forenoon of September 28, 1884. Her statement was, that her wounds were self-inflicted and made by a hatchet. In consequence of her injuries she died on October 4. Except some mental hebetude, she did not show any cerebral symptoms. But because of her mental dulness, her ante-mortem assertion that her injuries were produced by her own hand was not deemed trustworthy, and a judicial investigation was ordered. It was elicited that the woman lived in easy circumstances, but was somewhat peculiar and secretive in habit. Her family energetically scouted the idea of suicide, and the wounds were explained by a fall from a chair or table while she was dusting pictures.

An examination revealed the following injuries: Hair in the anterior parietal and frontal regions abraded; a wound with ragged edges, four inches long, extending from between the eyebrows upwards and backwards, and forking above, was continued to the right an inch farther. This large wound had a stellate appearance, and at its widest portion was two inches across. On the left side of it were two smaller wounds, and on its right side were two others, incised and parallel, that penetrated the skull. Their walls were inflamed and purulent. Numerous smaller wounds were found on the right forearm, elbow, knee, and on the left knee. The frontal bone showed a fissure two inches long, half an inch wide. In addition, there were seven punctures that had more or less completely penetrated the skull. Besides the above named lesions, on the inner surface of the calvarium were found blood clots with fragments of bone. The anterior portion of the right upper frontal convolution showed degeneration, and was dotted over with small hæmorrhages. The rest of the brain was anæmic and soft, the ventricles contained a turbid fluid; there were clots in the sinuses and purulent meningitis.

The expert opinion of Prof. Hofmann in the above case was as follows:

1. J. N. died of purulent meningitis.

2. This was caused by violence through the above named injuries, especially by that reaching from the base of the nose directly backwards, forking posteriorly, and producing the fissure on the frontal bone.

3. This fissure, as well as the neighboring elongated and sharply defined wounds of the scalp, coursing generally from before backwards, was caused by vigorous blows with a sharp and heavy instrument, probably with a hatchet, and the number of blows must have been nine or ten. The straight fissure of the frontal bone, and the incisions at the posterior end, from the fact that between the cleft walls, large pieces of bone are wanting, and the walls of integument bounding the wounds can be recognized, must have been caused by two or more blows.

4. Since these numerous wounds were compacted together upon a comparatively small surface, and easily accessible to the hand of the patient, and were in the same direction from before backwards and almost parallel, and since some of them scarcely break the skin, therefore the suspicion is very strong that these injuries were produced, not by a foreign hand, but by that of the patient herself, for the purpose of suicide. This suspicion is confirmed by the circumstance that on the inner surface of both forearms, on the flexor surface of the left wrist and under both knees are, huddled together, numerous parallel superficial wounds that doubtless arose from an attempt to open the veins, and were produced by the hand of the patient.

A suicide caused by blows directed against the head is a rare event, yet one sometimes observed; and experience teaches that this extraordinary mode of self-murder is chosen chiefly by the insane; it is therefore to be justifiably suspected that this patient, while she was insane, accomplished the deed.

The last history of a case that I shall relate, is one that came under my own observation:

On December 16, 1885, Dr. G. M. Staples was called to see J. A. M., a short, thick-set German, about 45 years of age, of florid appearance, and stone-cutter by trade. He saw M. about 10 A.M., and found him sitting up in a saloon that adjoined his shop. The patient was semi-conscious, and had the appearance of a man somewhat intoxicated. On inquiry, it was found that he had left the saloon about 9 A.M., after drinking several glasses of beer. The proprietor stated that he had appeared considerably depressed in spirits, but returned to his shop to work as customary. Twenty minutes thereafter two gentlemen attempted to enter his shop to consult him about work, but found the door, which was partially glass, locked. Looking through the door, they discovered M. walking towards them with a long chisel protruding from his forehead; he stooped down and attempted to unlock the door, but after trying some minutes and appearing unable to turn the key, those from the outside forced the lock and entered. M. then said to them, "Drive the chisels further into my head," and then, shortly after, "For God's sake pull them out." The patient was immediately taken to the saloon above spoken of, a distance of perhaps forty feet, and walked thence with but little aid.

Dr. G. M. Staples was summoned at once, and found on his arrival the following condition:

The head of a small stone chisel was found protruding about three lines from the scalp on the right side of the head, at a point about one and five-eighth inches above the meatus auditorius, and one inch in front of a line dropped from the vertex to the meatus.

The point of the chisel had emerged on the left side, about one and one-quarter inches, at a point one inch above, and half an inch in front of, a vertical line bisecting the meatus. The length of the chisel was eight and one quarter inches, the diameter of its head, three-eights of an inch, and it tapered to a flattened point. A similar chisel had been driven

[21] Wiener, Med. Wochenschrift, Nos. 15, 16, 17, "Selbstmord durch Hiebe gegen den Kopf," von R. Frank.

perpendicularly into the centre of the forehead, five-eighths of an inch above the plane of the upper margin of the superciliary ridges, and had penetrated one and one-quarter inches.

The pupils were dilated, the left irregularly; the pulse was slow and full. Forcible traction with strong forceps was necessary to extract the first mentioned chisel, and an assistant pressing against the protruding point with a block of wood. The second chisel was bent to an angle of 20 degrees, five-eighths of an inch from its point, and was firmly imbedded on the frontal bone, requiring for its extraction, the greatest efforts with the forceps. Moderate hæmorrhage from the orifices made by the first chisel, followed. It is of interest to note, that a superficial puncture was discovered one eighth of an inch above, and to the left of, the point of entrance of the second chisel.

Absorbent cotton was placed on the orifices, the head was bandaged, and the patient sent to his home half a mile distant. After the chisels were removed the patient became more comatose, and at noon he could be but slightly aroused. The pulse continued slow and respiration was somewhat laborious and stertorous; there were signs of restlessness and rhythmical flexion and extension of the lower extremities. At 1 P.M. his restlessness became much more marked. He continually endeavored to arise in bed, and get upon the floor, requiring two powerful men to hold him down. His eyes were constantly closed, and the urine had been voided in bed. Morphia, ¼ grain, was given hypodermically.

At 4 P.M. Drs. G. M. Staples and Bready visited the patient together; he was then resting more quietly. The lower extremities exhibited rhythmical movements as before. Respiration continued labored and there were ecchymosis and swelling about the eyes. Pulse was 80 and pupils contracted. Deglutition was slowly and very imperfectly performed.

A rubber drainage tube was inserted, one and one-half inches into the right temporal orifice, and half an ounce of dark blood evacuated. The temporal wounds had been previously probed and bone, supposed to be the posterior clinoid processes, had been touched. After the tube had been inserted and the wound drained, the patient was visibly easier. The tube was padded with absorbent cotton and retained in the wound. The clothing and bed were saturated with the urine that had been involuntarily evacuated.

At 10 P.M. the patient was seen by Dr. Bready and the writer; he was found very restless, continually throwing himself about the bed. The pulse was 90 to 100. He indicated by motions a desire to urinate and passed water freely. Deglutition was quite impossible. He was given, hypodermically, morphia, ⅓ grain, and atropia, $\frac{1}{120}$ grain.

The patient was seen by Drs. G. M. Staples and Bready at 8 A.M. on the following day; he had passed a comparatively quiet night, sleeping heavily. His respiration was 36, pulse 120, and fever, temperature 101. He could not swallow at all, fluids being retained in the mouth, and flowing out at the corners. Grumous blood, with some debris of cerebral tissue, kept slowly oozing from the drainage tube. Urine had been passed involuntarily during the night. Patient seemed to be sinking, and a solution of spts. ammon. aromat. was made to trickle down his throat.

At 3 P.M., he was again visited by Drs. Staples, Bready and Minges. He had died at 2:30 P.M. The dressings were removed, and a Nélaton probe with porcelain tip, was passed through the temporal wounds, from side to side, showing that the chisel had traversed brain tissue its entire length, after it had perforated the skull.

Although with our utmost persuasion, no autopsy was permitted, yet we were able to obtain very carefully made measurements. From these it was estimated that the first mentioned chisel must have penetrated the skull at the upper anterior angle of the squamous portion of the right temporal bone and lower margin of the right parietal traversing the base of his skull, in the region of the Sella Turcica, and emerging at nearly the centre of the squamous portion of the left temporal. The second chisel passed through the frontal bone, and must have entered the frontal lobe of the brain, at least half an inch. The mallet with which the chisels had been driven, was of wood, and weighed two and three eighth pounds. It was covered with blood and presented about fifteen indentations, that, from their peculiar situation and correspondence to the heads of the chisels, were supposed to indicate the number of blows needed to accomplish the deed described. Inquiry into the patient's family history, failed to reveal any hereditary tendency to insanity; it was discovered, however, that he had been greatly concerned about some business matters, that he was a hard drinker, and that he occasionally showed depression of spirits.

In the absence of an autopsy, any statement as to the particular cerebral structures wounded, is at the best, mere conjecture; but after careful study and measurement, on the subject, I have arrived at certain conclusions, and I give them to the reader for what they are worth. It is my belief that the first chisel penetrated the right tempero-sphenoidal globe, or entered the fissure of Sylvius, passed just below the Island of Reil, traversed the lenticular nucleus, internal capsule, and right optic thalamus. On the left side it must have passed a little lower through the substance of the tempero-sphenoidal lobe. That the region about the Island of Reil was not injured, I hold to be probable, by the fact that no aphasia existed.

The internal capsule being a part of the pyramidal tract, the course of nervous influence through it, from the cortical centres of motion, would be more or less modified and this, it may be, was the cause of the rhythmical motions exhibited by our patient. If, as was thought, the posterior clinoid processes were fractured, there probably resulted pressure on the pons; and if the patient had lived any time, the issue would perhaps have been similar to that of a case related by Belhomme.

In this case an exostosis from these processes pressed upon the pons; the patient was subject to attacks of vertigo, and impairment of the motion of the legs, followed by forced movements from left to right. Towards the close of the case, convulsions and rotary motions from left to right ensued.

From the lesions in the lenticulo-striate region, we would expect that the senses of vision and olfaction would be impaired, though this, in our case could not be ascertained. A wound in this locality according to Ferrier, would induce dilatation of the pupils, a phenomenon which we noted in the case of M. A wound in the tip of the frontal convolution would not be followed by any marked effect.

Such wounds as those in our case belong to the punctured or perforating variety of wounds of the head; of this class there are but six reported in the large surgical volumes of the "Medical and Surgical History of the War of the Rebellion," and in no one of these was there absolutely complete perforation. Five of these patients were wounded by a bayonet, one by a sword, one survived, permanently disabled, five died with extravasation of blood in one case, cerebral hernia in one, encephalitis in one, and abcess of the brain in two cases.

As to the treatment of our case there is little room for discussion. All surgeons will agree that the immediate removal of the foreign bodies was indicated. The best authorities, too, are in favor of establishing and maintaining the most complete drainage possible. Dr. Harlow who treated the famous tamping iron case, says that it was due in great measure to the free outlets in the skull above and below, that the man Gage owed his life.

In wounds of the head where the skull is perforated the mortality is always very high, no authority giving it as less than 80, and some giving it 100 per cent. "If death follows in twenty-four or thirty-six hours, it will be from shock and the extravasation of blood and serum, when the fatal result is longer delayed, encephalitis or abscess will ultimately prove fatal. When the projectile remains within the cranium, the danger is greater than when it passes through or perforates, as in the former case there is one foreign body more in the cranium. The statistics of our late war show a difference of 5 per cent in favor of perforating over penetrating fractures, the mortality in the former being 80 per cent. and the latter 85.5 per cent."[22]

A study of the above cases shows that death often does not result from the immediate effect of the injuries, more often the patient either gets well of them, dies from the resulting inflammation, or tries some other method of suicide. Another lesson to be drawn from these cases is, that even heavy blows against the head do not necessarily produce concussion of the brain.

In a given case, the diagnosis between murder and suicide may be of great importance, and attention to the following points, will be of use:

1. The situation of the wounds must be one readily accessible to the hand. The majority of these injuries, as the cases given above attest, are situated on the frontal and parietal bones, more rarely on the temples, very rarely indeed upon the occipital bone.

2. Usually more than one wound, frequently many, are found. It is easily comprehensible that the first blows are made somewhat cautiously, and being comparatively unimportant, do not render the suicide incapable of completing the act.

3. The injuries are, as a rule, huddled together in a comparatively small space, and take a parallel course. This is easily explained by the quick motion that has been taken by the hand. This disposition of the wounds almost characteristic, is one of the most constant and weighty signs to which our attention can be directed.

4. Heavy strong instruments are regularly used. If they are blunt, fewer wounds are to be looked for, as unconsciousness would be the more quickly induced.

5. In many of these cases, other injuries made with suicidal intent, or traces of them, can be found in other portions of the body.

6. Signs of resistance or non-resistance, should in every doubtful case be looked for. Regularity of the wounds, and a grouping together of them, are not compatible with resistance.

8. The history of the patient, as concerns the mental state is always of importance. Most of these suicides had shown aberrations of intellect, perhaps of a transitory character, and hereditary taint came often into play. Delirium and cephalalgia were also the causes in one case each.

It goes without saying, however, that to avoid an error of diagnosis, all the circumstances in a given case must be carefully considered.

[22] Agnew's Surgery, Vol. i, p. 290.

SURGICAL METHODS FOR THE RELIEF OF PRURITIC RHINITIS (HAY FEVER).

BY THOMAS F. RUMBOLD, M.D.,
OF ST. LOUIS, MO.

My method of ascertaining who will require operative procedure, is to treat by the spray producers *every case* for a few days, giving from ten to fifteen treatments. From the effect of these applications, I judge whether or not the case will require severer measures. It is seen that I operate on as few patients as possible, because I fear the effects that will follow the formation of scar tissue in the nasal cavities. I do not wait until the pruritic season has passed away, but operate as soon as I find that the spray producers will not prove effective.

Relief by Surgical Measures.—This consists in the removal of the diseased, hyperæsthetic mucous membrane that covers the turbinated processes and portions of the septum nasi. This is best done by means of Jarvis's wire snare, or some modification of this valuable instrument.

I prefer this instrument to the galvano-cautery, because it can be employed to remove even an extensive hyperplasia of the turbinated processes without leaving a large cicatrix, certainly not the one-tenth of the size of the portion removed.

To be enabled to apply this instrument with comparative ease to the patient, a nasal speculum will be required. With it the passage can be dilated to some extent.

I have had a nasal speculum made that has handles eight inches long. It is illustrated in Figure 1.

Such a length enables the patient to hold the instrument in position in the nasal passage, thus allowing the physician to use his hand for other purposes. If the patient does not hold the instrument in the best position for complete inspection—and they seldom do at first—the physician must properly adjust it. Thus held, it will be far more comfortable for the patient than if the physician were to hold it, and the parts will be fully as well seen.

If this is the case why cause great discomfort, if not excessive pain by employing a self-retaining nasal speculum?

To apply the wire snare, the nostril should be dilated to its utmost, and the loop passed in with its transverse diameter held vertically. It will not be possible to prevent the wire from touching both the septum and the turbinated process, which may excite sneezing. If it does the loop will have to be withdrawn, and a new attempt made.

Placing the wire loop around the growth is difficult to accomplish, and frequently requires great patience and dexterity. The loop is slowly passed into the nostril, and made to surround the growth. If this is large enough to protrude a quarter of an inch, it may

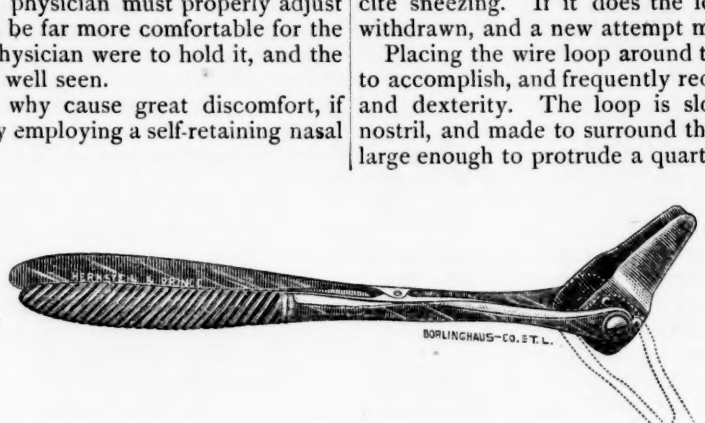

FIG. 1.—NASAL SPECULUM, eight inches long, with reversible blades. This length is given it to enable the patient to dilate his own nasal passage.

FIG. 2.—Modified Jarvis Wire Snare.

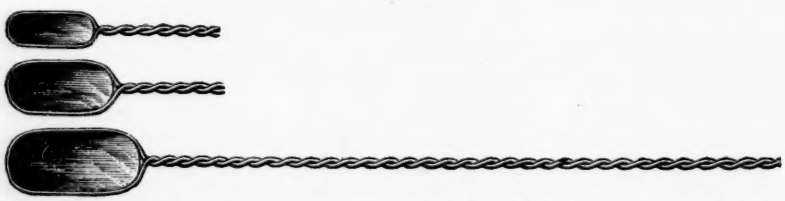

FIG. 3.—ANTERIOR NASAL MIRRORS.—The mirrors are represented full size. The handles are five inches long. The desired angle may be given to each mirror by bending the wire handle near the glass.

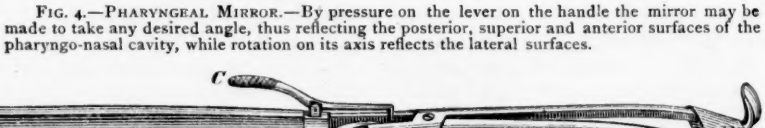

FIG. 4.—PHARYNGEAL MIRROR.—By pressure on the lever on the handle the mirror may be made to take any desired angle, thus reflecting the posterior, superior and anterior surfaces of the pharyngo-nasal cavity, while rotation on its axis reflects the lateral surfaces.

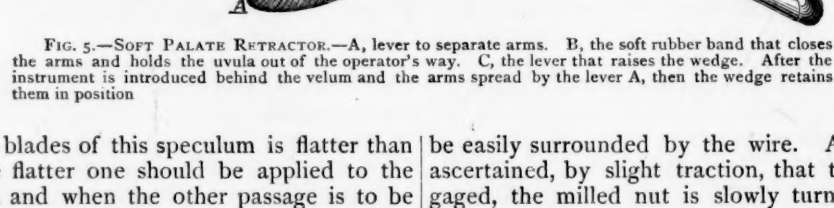

FIG. 5.—SOFT PALATE RETRACTOR.—A, lever to separate arms. B, the soft rubber band that closes the arms and holds the uvula out of the operator's way. C, the lever that raises the wedge. After the instrument is introduced behind the velum and the arms spread by the lever A, then the wedge retains them in position

One of the blades of this speculum is flatter than the other, the flatter one should be applied to the nasal septum, and when the other passage is to be inspected the blades are to be turned over or reversed, as shown by the dotted lines in the illustration.

I employ this speculum in all operations in the anterior nasal passages and during all applications of the spray producers to the anterior naris.

be easily surrounded by the wire. As soon as it is ascertained, by slight traction, that the wire is engaged, the milled nut is slowly turned, time being given for the wire to sink into the hyperplastic and partially œdematous tissue, as it always does; and in about half a minute the nut should be again turned partly around. As soon as it is ascertained that the loop has a good hold on the growth, the patient

should be directed to take hold of the instrument with the left hand. He should then turn the nut so slowly that he experiences but little pain.

An important direction, is to keep the end of the instrument, from which the loop extrudes, held close to the outer wall of the nostril. If this is not done, the loop will slip off over the anterior extremity of the hyperplastic growth. It should be borne in mind. that the loop seldom slips off over the posterior extremity of the growth.

It generally takes about half to three-quarters of an hour to remove even a small enlargement, while for one of so great dimensions as to fill the nasal passage, from one to three hours are required. The only sure guide is not to cause too much pain.

When the instrument has cut itself out, if the patient does not blow his nose—which he should not do—there will be no loss of blood, or at least but very little. This insures a small scar, one about the size of a large pin's head.

Not unfrequently the hyperplasia is a rounded body only, such as the wire loop will not take hold. In this case I have taken the needle of a hypodermic syringe and transfixed the growth and then placed the loop over it. This gives the wire a hold on the tumor. Since then I have had long needles made, taking my pattern from some I saw in the hands of Dr. Jarvis, in June, 1882.

This led to the idea of having the needles so attached to the ecraseur, that they could be used after the loop of wire was placed around the growth. Figure 2, illustrates the instrument I have had made for this purpose.

In some instances I find that this snare, as modified by me, has a little advantage over the original Jarvis snare, but in very many cases I use the Jarvis snare, with his needles in the place of this instrument. The modification consists in the following:

1. The excising nut is placed at the outer extremity of the instrument, so as not to intercept the surgeon's view of the parts to be operated upon.

2. A ring is employed for holding the instrument. I prefer the patient to hold the instrument while the excision is being performed, as he can do so far more comfortably to himself than can be done by any one else, I also direct him to turn the excising nut. As the exision should be performed slowly—to prevent hæmorrhage and the foundation of an extensive cicatrical surface—his sensations are the best guide as to the speed of the cutting process. As the pain lessens he is directed to turn the nut; and the placing of the nut on the outer extremity of the instrument, I have found to be a little more convenient also for the patient.

3. The wire holder is a rod, not a tube. There is not the least advantage in this, but this is required if the excising nut is placed on the outer extremity of the instrument. This rod is long enough to extend beyond the inner extremity or operating end of the instrument, and the portion thus protruding has a small opening in which to fasten the excising wire. After the wire is firmly attached, the extremity of the rod is then drawn into the barrel of the instrument, leaving the loop of wire extending one inch, more or less from the instrument, and ready to be applied to the hypertrophied tissue to be removed.

4. Two needles are permanently fixed on a perforated slide, which moves easily on the instrument and is seen next to the ring. To make the needles take the right direction, their points pass through a guide that is also slipped on the instrument, but at its outer extremity. This guide fits so tightly on the instrument that it does not leave its place while the needles are being pushed through it by the finger of the operator applied to a perforated slide, which, as has been said, moves easily on the barrel of the instrument. This mechanism insures the needles taking the desired direction.

5. The instrument is bent on itself, at the location of the perforated slide. This is done to make a sufficient angle to prevent the nut from interfering with the operator's view of the parts inspected. The illustration given above does not indicate this angle very clearly, as the instrument is made to lie on its side to show the ring.

The Galvano-Cautery.—Every one has a favorite manner of applying the galvano-cautery. Some allow the platinum to become almost white-hot before passing it into the nasal cavity. I did this on several occasions, to my patient's detriment, the radiating heat being so great as to cause acute inflammation of the whole cavity and great swelling of the face. The electrical energy should be sufficient to make platinum white-hot in one second of time while held in the air. Of course if the current was allowed to continue, the wire would be burnt through in about three or four seconds, but when the electrode is laid on the tissue, this keeps the wire from becoming sufficiently hot to be destroyed.

I prefer to place the electrode on the spot to be cauterized and then make the connection with my foot, never using my finger or thumb for making the connection, as this would necessitate holding the instrument so firmly in my hand that I could not be certain of the degree of pressure I was making on the part being burned.

Immediately on the withdrawal of the electrode, I spray the cavity with spray producers Nos. 2 and 5, employing the vaseline comp. given on page 497, October 30. This will have a soothing effect, but if the patient still complains of the distress from the burning, I apply the oleate of cocaine. This is an excellent preparation, and produces a much more lasting effect than the solution. The strength that I now employ is 5 per cent.

The next day the patient should receive the regular treatment with the spray producers.

As soon as the patient can endure a second application of the cautery, it should be applied. Generally one or two applications a week can be borne without great discomfort.

Caustic Applicators.—The applicator that I have most frequently used, has been a silver probe. When I desire to use chromic acid—which is very seldom—I heat the point of the probe and then touch it to a crystal of chromic acid; the crystal instantly melts and coats the probe point, and the instrument is then ready for use. Cocaine, a 5 per cent. solution, should

be applied to the parts frequently for half an hour before the acid is applied. Care must be taken not to hold the acid too long on the part to be destroyed; but just to touch the parts is quite sufficient. The spray of vaseline, with No. 2 spray producer, should be applied immediately after the touch is made.

Crushing.—I have grasped the sensitive portions of the membrane with a slender, but strong pair of forceps, maintaining the hold on the membrane for two or three minutes, first spraying the parts with a 2 per cent. solution of cocaine. The results are quite satisfactory.

Locating the Diseased Membrane.—In locating the hyperæsthetic spot or spots, I employ, if possible, a small reflector (Fig. 3.) if it can be passed into the anterior nares without producing much, if any, irritation, using, at the same time, a nasal speculum. I then insert a probe, bent slightly at the point, and ascertain according to the method employed by Dr. Roe, of Rochester, N. Y., the location of the most sensitive spot known by the patient experiencing a *burning sensation.*

Nitric Acid.—I have used nitric acid but once. The disturbance occasioned by its application was so great that I think I will not use it again.

Posterior Nares.—If the posterior portions of the turbinated processes or the septum nasi are to be inspected or operated upon, I hand the patient the tongue depressor and direct him to hold his tongue down with it, using his left hand. If the space between the porterior wall of the pharynx and the soft palate is sufficiently large, I place the pharyngeal reflector (Fig. 4.) back in the fauces to get a reflection of the posterior extremities of the inferior and middle turbinated processes and the septum nasi, using my left hand, leaving the right hand for the manipulation of the diagnostic probe, the electrode, the Jarvis snare, or the chromic acid probe.

If the volume hangs too close to the posterior wall of the pharynx, I hook the pendent portion with the spreading soft palate retractor (Fig. 5). Before drawing the palate forward, I spread the limbs of the instrument a little, and then draw it slightly outward. I then lift the right hand of the patient to the handle of the instrument and direct him to draw it as far forward as he can without causing unpleasant sensations. The patient can hold the instrument very much better than an assistant, as he knows how to control it so that it will not cause him to retch or occasion pain.

The reflection from the pharyngeal mirror will assist the operator in locating the sensitive spots, and in adjusting the Jarvis snare.

In making all caustic applications to these parts I employ the same methods.

A CASE OF PURULENT INFLAMMATION OF THE MIDDLE EAR WITH BRAIN COMPLICATIONS.[1]

BY BOERNE BETTMAN, M.D.,
OF CHICAGO, ILL.

Acute purulent inflammation of the middle ear is certainly a very common occurrence, and in the majority of cases runs its course in a few weeks without any complications. In some instances, however, the inflammation invades adjacent parts, and may give rise to very annoying, and even serious and grave results. Cases are on record where the inflammation has spread to the brain, giving rise to severe meningitis and death.

I will report one of these complicated cases, with, fortunately, a happy termination.

On April 1, 1885, I was kindly asked by Dr. Doering to examine the ears of a young lady, æt. 18, suffering with an acute purulent otitis media. The patient had contracted a severe cold five days previously. Two days later she complained of pains in the ears and loss of hearing. Counter-irritation, in the form of blisters to the mastoid region, and instillation into the ear of mild astringents, had been ordered by the attending physician. The young lady also employed a warm water spray very energetically, hours at a time, as she told me afterwards, to ease the pain. When I first examined her, the discharge from one ear had lasted three days, from the other ear but a day or two. Her condition was as follows:

Aur. sin.—Discharge of sero-purulent matter. M. T. very much injected, large perforation on its lower posterior quadrant.

Aur. dex.—Profuse discharge of creamy pus mixed with blood. M. T. almost totally destroyed. Mucous membrane macerated and very succulent—the slightest touch with a probe producing hæmorrhage. Watch was not heard when placed against auricle, mastoid and glabella Loud conversation was understood only when spoken directly into the ear. The otorrhœa was so profuse that the cotton batting over the ear had to be changed every half hour. I recommended frequent cleansing of the ears with lukewarm water and peroxide of hydrogen, also the instillation three times daily of the following solution:

℞. Zinc sulph..... 0.20.
Acid carbol..... 0.40.
Aq. dest..... 30.00.
M.

The discharge from the left ear ceased in one week, with perfect restoration of hearing. Two small furuncles which appeared later on at the mouth of the external auditory meatus yielded to warm applications. Several granulations in the right tympanum were destroyed with nitrate of silver.

April 12. Patient complained of pain in the right mastoid region. I sent her to bed and ordered cold applications to the part. She soon obtained relief.

April 14. Severe frontal headaches caused much distress. The discharge from the right ear was less. Temperature not much increased. Prescribed soda salicyl. grs. 10 every three hours.

April 18. A slight internal strabismus of the right eye was noticed. Temperature but slightly elevated.

April 21. Dr. Doering examined the case with me. We found little change in her condition. Otorrhœa less, but still profuse. Temperature 100. No tenderness in mastoid region; frontal headaches. The doctor concurred with me in the opinion that the inflammatory process had invaded the brain, in

[1] Read before the Chicago Society of Ophthalmology and Otology.

all probability through a dehiscence in the tegmen tympani. Pressure on the abducens nerve by exudative material would account for the strabismus. Ice bags, which had been applied to the head since two days, were continued, also the cleansing of the ear with the oxygenated water. Salicylate of soda was discontinued. Being troubled with dysmenorrhœa, bromide of potash and tincture of gelsemium were recommended by the family physician.

April 22. Headache was intense. She was supported in a half reclining position by pillows; she could not lie down, owing to the severe pain in the head. Vomited frequently after taking food.

April 23. Discharge from ear much less. Slight pain in the mastoid again quickly subsided on the application of ice bags.[1]

April 24. No pain in mastoid region. Frontal and occipital pains less violent. Vomited once or twice during the day.

April 26. Motion of ext. rectus much better; lachrymation ceased. Conjunctival injection of right eye entirely gone; it had existed but a few days. Right ear perfectly dry.

April 28. Appetite better; pain in head less; slept better.

April 29. Very little headache all day, slight during the night, and pain confined now to the left side of head.

May 1. Slight headache on left side. Slept well, discarded supporting pillows. Left eye epiphora. Temperature and pulse normal.

May 14. Out of bed. Diplopia produced only when the eye is turned far to the right side.

June 1. Eyes normal. Hearing on the left side normal; right ear, hearing $\frac{2}{3}\frac{6}{8}$. The points of interest attached to this case may be classified as follows:

1. Constant poulticing in this form of disease is reprehensible practice, and fraught with destructive changes. The patient, contrary to the physician's instructions, applied a spray of warm water, hours at a time. The natural result was a maceration and breaking down of the tissues, accompanied by intense engorgement of the vesssls and infiltration of the surrounding parts. Granulations and consequent suppuration completed the picture of a most intense acute inflammation. All forms of continuous poulticing must be carefully avoided unless it is desired to favor suppuration.

2. The invasion of the cranial cavity is not at all a frequent accompaniment of otitis media purulenta acuta, neither is its termination usually as favorable as in the recorded case. We know that the osseous partition between tympanum and cranial cavity is extremely thin, and in some instances natural fissures exist in the tympanic roof, covered only by the mucous membrane. This naturally favors the progress of the disease by direct continuity of tissue and involvement of the meninges. In chronic forms of the inflammation these complications arise only after the bony barrier has been broken down by the protracted process of caries and necrosis.

3. The relief obtained by the application of ice bags to the mastoid was immediate, and substituted the ordinary method of applying fomentations. Last spring I had six or eight cases of acute inflammation of the middle ear accompanied by slight puffiness and extreme tenderness of the mastoid region. I regarded this as a slight periostitis, or rather congestion of the bone covering, associated, perhaps, with a hyperæmia of the mastoid cells. These cases yielded very readily to the cold applications. In one instance the puffiness was extensive enough to push the auricle forwards, usually indicative of a severe inflammatory process in the mastoid. The pain was intense, temperature high. The condition certainly justified a Wilde's incision, but before resorting to operative interference I resolved to try Leiter's tubes. They were kept *in situ* forty-eight hours, with the most satisfactory result. The complication rapidly disappeared.

I invariably order cold compresses or Leiter's tubes to the mastoid, as soon as the slightest tenderness is experienced. This procedure restricts, localizes the inflammatory process to the tympanum. Warm applications in the early stage encourage increased blood supply and infiltration of the tissues. The inflammation is thereby induced to invade adjacent parts.

[1] Dr. H. A. Johnson kindly saw the case with me on two occasions during the absence of Dr. Doering.

A CASE OF PSEUDO-MEMBRANOUS LARYNGITIS TREATED BY ELECTROLYSIS.[1]

BY F. E. WAXHAM, M.D.,

PROFESSOR OF DISEASES OF CHILDREN, COLLEGE OF PHYSICIANS AND SURGEONS, OF CHICAGO.

Almost every organ of the human body, when in a diseased condition, has been subjected to the influence of electricity. The urethra, the prostate, the ovaries, the uterus, the brain, the liver, and the spleen, have all been treated by this silent, strange and powerful agent. Until recently, however, the larynx has not been invaded. If it be true that strictures of the urethra can be cured by the galvanic current; if it be true that enlarged prostates can be reduced, and fibroids of the uterus successfully treated, it has occurred to me that stenosis of the larynx from membranous exudation might be reduced in the same manner. If false membrane can be destroyed or detached in this manner, it will be a great advance in the treatment of one of the most distressing, frightful and dangerous diseases of early life. The thought that this is a field worthy of investigation is the apology I make for this brief report.

On October 26 I was called to see Esther J., a little girl of eight years. The little patient had been sick nearly a week with membranous croup, and had been attended by Dr. E. C. Helm. The patient was also seen by Dr. Sanders. The child was in a most desperate condition, and all hope of recovery had been abandoned. The pulse was rapid and feeble, the face of a deadly pallor, the lips livid and the respiration laborious in the extreme. The child was in the last stages of asphyxia, already semi-comatose, and was roused with difficulty.

[1] Read before the Chicago Medical Society, December 6, 1886.

An intubation tube was threaded with platinum wire and used as a negative electrode. At 5 P.M. the tube was introduced into the larynx without difficulty, and the respiration at once became easy. The child was soon resuscitated, and after coughing out considerable softened membrane and ropy mucus, once more became conscious of its surroundings. The platinum wire was now insulated by passing it through a very small rubber tubing. The platinum wire projecting from the tubing was now attached to a twelve-cell McIntosh galvanic battery. The positive electrode consisted of the ordinary sponge, which was moistened with warm water. The sponge was placed over the larynx, and a current from ten cells employed. This current caused some pain and considerable redness of the skin under the sponge. The current was reduced to eight cells, which was borne more comfortably and was passed five minutes, during which time considerable mucus and softened membrane were expelled. The tube was now accidentally withdrawn and the respiration appeared very easy without it. The little patient, who had taken no nourishment for several hours, and but very little for two days, now drank eagerly two glasses of milk, and passed into a quiet sleep. At 7.30 P.M. I was again called and found the respiration becoming labored. The tube was reintroduced and electrolysis again performed in the same manner. A current from eight cells was first employed, and then from ten, the sitting lasting ten minutes and the current causing some discomfort. One could not doubt the effect of the current upon the false membrane, for it was rapidly detached and expelled in small patches, together with considerable ropy mucus. The tube was removed and the respiration was again comfortable. The child seemed bright and interested in those about her.

Nine P.M.—Sleeping soundly. Pulse 140, temperature 103°, respiration 32. The respiration, although noisy, was not labored. The voice, which had been suppressed and whispering before the operation, now became louder, and the cough, which had been smothered and husky, became stronger and clearer. The respiration as well as the voice and cough indicated swelling of the mucous membrane about the vocal cords, rather than the presence of membrane. At 10.30 P.M. gave tr. opium gtt. vi *per os*, antipyrin gr. xii *per rectum*, and cold applications applied to the neck.

At 11.15 P.M. temperature 102, pulse 120°, respiration 32. The little patient took nourishment well and was left feeling quite comfortable.

At 2 A.M. I was again called and found the respiration labored and the dyspnœa well marked. Not feeling justified in experimenting further with the patient, electrolysis was not again employed. The intubation tube was introduced and left *in situ*, giving the child immediate relief. No membrane was expelled when the tube was introduced. There were now evidences of pneumonia, the respiration being rapid, although perfectly easy, the temperature high, and increased fremitus over both lungs.

Eleven A.M., pulse 150, temperature 105½°, respiration 40, taking nourishment fairly well, but restless and very thirsty. Directions were given to sponge the child frequently with cold water, and antipyrin was given in 15 gr. doses, *per rectum*.

Three P.M., pulse 150, temperature 105½°, respiration 40. Growing weaker and taking but little nourishment. Five P.M., pulse 150, temperature 103°, respiration 60. The respiration, although rapid, is perfectly easy. The patient restless and refuses all nourishment. Nine P.M., pulse very rapid and feeble, temperature 104½°, respiration 64.

The little patient died at 2 A.M.

It was expected that the galvanic current would have little or no effect upon the false membrane, but we confidently hoped that it would relieve the congestion and swelling of the tissue. Contrary to expectation it certainly seemed, to one watching this case closely, that it had a most decided effect in loosening and detaching the membrane, but that the secondary effect was to increase the swelling and congestion.

In this connection the result of a few experiments may not be uninteresting. Wishing to observe the effect of the galvanic current upon the healthy larynx, two rabbits were subjected to electrolysis, with the assistance of Dr. Bütner. The first rabbit, a half-grown one, was given chloroform and the tube introduced into the larynx with considerable difficulty, on account of the small size of the mouth. The attachments were made and a current from eleven cells was passed for five minutes and the tube removed. Some dyspnœa followed the operation, but it was attributed to the rough usage to which the larynx was subjected, rather than to the effect of the current. The dyspnœa gradually subsided and the rabbit recovered.

The second rabbit was given a current from eight cells, in the same manner, and seemed to suffer no inconvenience.

No deductions can be drawn from the report of a single case, but we may express the hope that this subject may be still further investigated. It is possible that too strong a current was employed, or possibly the current was not of sufficient strength. It may be necessary to employ a current that will verge on cauterization, and employed with an anæsthetic. These queries, however, can only be answered after further investigation.

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TRANSPLANTATION OF TEETH.[1]

BY WM. N. MORRISON, D.D.S.

OF ST. LOUIS, MO.

I will give the history of one very interesting case. In the *Missouri Dental Journal*, of July 15, 1882, is a paper by me upon this subject, and among other cases reported is a prospective case which presented itself last fall: A young lady of slight build, about 22 years of age, teeth not of extra quality, arch perfect, and articulation correct, except the left-erratum; read right- instead of left-side of the mouth;

[1] Read in the Section on Dental and Oral Surgery at the Thirty Seventh Annual Meeting of the American Medical Association.

superior canine, which was missing. The left-central was very loose. On careful examination I found it to be caused by the absorption of the root below the cervical line, by the crown of the canine, which lay horizontally in the process with its point to the median line, entirely across the root of the central, the latter being as thoroughly absorbed as though it was a deciduous tooth.

I had decided to extract both and transplant the canine to the socket of the central, after enlarging and deepening it to correspond to the root of the canine; after the canine had become fixed, if the crown could not be made to look as well as a central, I intended to cut it off and substitute a porcelain crown with a metallic pivot; but this heroic operation was indefinitely postponed by reason of the young lady being called home from our city.

This case is all the more wonderful from the fact that six dentists had already identified themselves with it; two of a neighboring city told her it had been broken off by blow or fall. Although previous to that decision one had constructed and adjusted regulating plates which were worn for months; exostosis being assigned as reason for enlargement; but a tooth never until I demonstrated it. Such was the case up to the time I first saw it, and gave my diagnosis and plan of operation. Other members of the patient's family had their favorite dentists, and she was taken to one and my plan duly explained and criticised; it was pronounced an impossible, impracticable and dangerous thing, but my diagnosis was pronounced correct so far as the canine was concerned, and its extraction was urged; to make this decision more forcible another was called in consultation, and they administered ether, and gouged away the process, exhausting themselves and the patient after breaking off a piece of the crown.

Further operations were postponed till some days later, when Dr. —, who was called to use his persuasive powers and hold her hands, renewed hostilities, but with no better success. About three weeks later she was taken by the above or by their order to Dr. —, who administered gas and extracted the canine, which was laid away to dry, and the patient assured that the central would grow firm again and be as useful as ever. When the root was entirely absorbed and the crown only suspended by slight attachment to the gum, the patient returned to her home, carrying with her the extracted canine trophy. All this occurred in the fall of 1881, and I had no knowledge of it until the discussion of my paper in the St. Louis Dental Society.

Now two years later, or three years after I first saw the case, the patient came to see if I would not transplant her right lower canine in the place of the upper central. The canine was condemned to extraction by another dentist, as its occlusion against the superior lateral was forcing the lateral out of place and making it assume an unsightly angle to the others. The central was hanging loosely to the gum and had been for three years, the other teeth supporting it latterally, and the lip and tongue antero posteriorly; the patient was in constant dread of swallowing it, particularly at night. Contrary to the opinion of my brother dentists in the society, and statistical evidence collected from best dentists all over the country, (see discussion of the paper, *Missouri Dental Journal*, page 247, July 15, 1882), the operation was performed; the loose tooth was removed and with a drill, (using cocaine). The process was opened up exactly in the track of the root which should have been there; at any rate I expected to find a piece of the root, but not a particle was there; with drill and fissure buri enlarged and deepened the socket quite to the floor of the nose, and antero-posterially from plate to plate; and remember the anterior plate was cicatrical bone and not any to spare at that, owing to former extractions of canine, above described; the teeth and general shape of the socket being now known. The right lower canine was extracted, and root vessels removed, and canal filled with gold wire, and a prominent contour filling built upon its distal face or long angle, with platinum gold, which made the median edge of the new right central which it was to be. The root was long, and instead of being round as its predecessor, was oval or flattened on the sides, it was a fortunate thing that there was a thin scale of plate left upon the labial side when the socket was enough enlarged to receive the root.

A black rubber splint capping the crowns was worn about four weeks, shielding that tooth from injury; no unusual results followed; it was speedily taken into fellowship without an unfavorable symptom. The right lower first bicuspid was much within the arch, and by forcing it out with a jack-screw it performed excellent service as a canine. By this operation, although not as good as the one first contemplated, this beautiful young lady is spared the uncomfortable and humiliating necessity of wearing an artificial appliance, and has her own home-grown natural teeth distributed where they will do the most good.

MEDICAL PROGRESS.

IODOFORM GAUZE IN GYNECOLOGY.—In *Volkmann's Sammlung*, No. 288, FRITSCH, of Breslau, gives the manifold uses to which he puts iodoform gauze in gynecological practice. A 10 to 50 per cent. article is made, and the former may be easily made stronger in iodoform by incorporating the gauze with more iodoform, either in powder or in solution with ether, or in form of a glycerole. Iodoform gauze should be the only substance used in making tampons. In aseptic cases these tampons may remain *in situ* for ten days without showing any signs of putrefaction. In making these tampons a strip of gauze five cm. broad and two m. long is cut off, folded upon itself fan-shape, and inserted by means of the hand or dressing forceps, the end being allowed to hang out of the vulva, Simply drawing on this end will unravel the tampon and remove it without pain or inconvenience. At the head of palliative cancer treatment he shows the great advantages of making use of iodoform gauze tampons. Formerly, in bleed-

ing and ulcerating cancer, irrigation was used for the double purpose of disinfecting and removing the offensive secretion. If the hæmorrhage was considerable a tampon soaked in liquor ferri was introduced. In twenty-four to forty-eight hours this tampon had become offensive, and if its removal was delayed to the third or fourth day it was a mass of putridity. It had become hard, was removed with great pain and difficulty, its removal was followed by a mass of offensive coagula and discharge, and it left the vagina irritable and contracted.

In *àvidement* and cauterization the iron tampon was applied to the oozing surface, to stop the hæmorrhage. If the tampon was well applied it accomplished this object, but if it was simply packed up into the vagina, the hæmorrhage continued, the tampon had to be reapplied, or the patient died from loss of blood, as he has had an opportunity to observe in two cases. This procedure is certainly not one of ideal perfection, and from a theoretical standpoint grave objections can be brought against it. Instead of introducing fluids into parts already bathed in profuse discharge, a method by which the secretions are absorbed, disinfected and restrained would seem more rational, especially if it combines the advantages of less frequent dressings. He makes use of the following dry method of treating cancer: A small Sims' speculum is introduced, the vault is stuffed with gauze, the gauze is then stuffed round about the portio so that it lies imbedded in iodoform gauze. It is not necessary to use great quantities of gauze in this dressing, for it may be stuffed up very loosely. If, however, the cancer is ulcerating, the gauze must be firmly packed into the cavity. If one piece of gauze is not sufficient, several may be used, the ends being made to hang out of the vulva. In most cases an astringent adjuvant becomes necessary. Tannin and iodoform are intimately mixed, and the gauze filled with the powder and then packed into the cavity. A tampon of this kind stops hæmorrhage, checks secretions, it disinfects, absorbs, and has an anodyne effect. It can be kept *in situ* four or five days, and may be removed easily and without pain. The advantages of this method are very apparent after an operation. After the cancer has been scraped with the spoon and cauterized with the thermo-cautery, the cavity is tamponed with iodoform tannin gauze, or it is first filled with the powder and the tampon applied over the powder. This dressing is left unchanged for five to six days, and is then renewed. If the hæmorrhage is obstinate, glycerine may be added to the powder, iodoform, tannin, aa 10, glycerine 200, and the tampon soaked in it. As soon as the tampon is no longer stained with blood, the dry treatment is resumed. In this way cancer may be kept free from smell and discharge until the death of the patient, the tampon, even in large and profusely secreting cavities, being changed only twice a week.

Iodoform gauze may also be inserted into the cavity of the uterus. In puerperal metritis, with offensive discharge, the womb is syringed out, and then stuffed with gauze. If pieces of placenta have been retained, or in case of ulcerating polypus, these are removed and the gauze is applied. In endometritis he also introduces the gauze, filled with the iodoform-tannin powder, or soaked in its glycerole. The gauze is very readily introduced into the uterus, even in the multiparous womb a strip 20 cm. in length can be easily inserted. In incision of the cervix the gauze is packed into the cervix and between the cut surfaces.

Tamponing or filling large wounds in abdomen or large abscess cavities with the iodoform gauze has replaced wound drainage in his hands. In vulvar and vaginal cancer where, from loss of tissues, the deeper parts cannot be approximated, the cavity is stuffed with gauze. In the two cases operated on the cavity closed rapidly, there was no fever, and recovery was complete. He cites one case of perityphlitis abscess, refers to several cases of ecchinococcus cysts, gives three cases of laparotomy for ovarian tumors, and two cases of extra-uterine pregnancy, in all of which the abscess cavities, or the extensive wound surfaces, were dusted with iodoform and then packed with iodoform gauze, folded in fan-shape, the ends being carried out at the lower angle of the external wound. After seven or eight days these strips were drawn out, and if necessary replaced by one or two fresh strips. No fever followed these operations, recovery was rapid, and the patients could be discharged cured in a very short time. He claims that all discharges from the abscess walls or the wounded surfaces are absorbed, disinfected and carried out into the external dressings by capillary drainage; that if any wound secretions remain behind these are aseptic and innocuous; also that a large part of his splendid results is due to filling up the cavities with the dry iodoform gauze, and that the removal of this dressing is easy, and can be accomplished through an opening in the abdominal wall.

THE USE OF SEDATIVES IN INSANITY.—In the *Practitioner*, September, 1886, p. 181, DR. SAVAGE contributes a most valuable paper on the use of sedatives in insanity. The old practice of restraint by means of chain, cord, or whip was most barbarous, and the practice of producing quiet by means of narcotics is most strongly condemned. The principle of controlling patients by means of drugs will continue to be used by general practitioners until the public overcome their prejudice against asylum treatment. In nearly every case the history is the same. Sleeplessness and depression are tried to be overcome by opiates, or it is attempted to subdue violence and restlessness by narcotics. Something must be done if the patient be treated at home, and it is on this account that the author enters upon the subject of drugs in insanity, giving his experiences when they may do good and when they are harmful. At the Bethlehem Hospital such drugs as the bromides, morphine, chloral, and opium are seldom if ever used. In studying the treatment of mental disorders by means of sedatives, it must be remembered that two very opposite conditions give rise to mental disturbances: In one the brain is the chief cause of the disorder, in many cases the evil being organic decay of this organ; in other cases the mental disorder is functional, and may be due to bodily disease react-

ing on the mental processes, or to perversion of the senses and allied disorders of intellectual processes. In cases of brain decay you must be careful not to begin with large doses; in functional disorders you must sometimes not be afraid to give large doses, for in functional disorders of the mind profound impressions produced by therapeutical or accidental circumstances may effect wonders. In these cases the old term "alterative" has some meaning. In some functional cases, a whitlow, or a toothache, a severe attack of diarrhœa, or sickness, may cause relief, and in the same way a blister or a seton, an emetic, or a powerful sedative may effect a similar result. The author does not believe in treating the symptoms of insanity as if they each had a definite meaning. Sleeplessness may as often be removed by a stimulant as by a narcotic. Bromide of potassium is supposed to be the strongest remedy we have for nervous excitement, and in some cases of restless excitement it is very useful, if given in doses of 20 grains three or four times a day; it is most useful in young cases belonging to nervous families, especially those who complain of vague uneasy feelings in the head. In cases of sexual perversion of one kind or another, bromide is very useful. In young men and women, with a tendency to commit suicide or be violent, a dose of from 20 to 40 grains at bedtime has good effect. Any tendency to epilepsy is often treated by bromides, but here frequently the number of fits are reduced at the expense of harm to the mind. Bromide is generally given in combination with chloral, and the author's experience is that they do no good. In the sleeplessness of the early stage of puerperal insanity it is well to try them, and they may tide over a dangerous time; but if rest be obtained at the expense of appetite for food, more harm than good is done. Dr. Savage lays down the law: if sufficient food be taken, bromide or bromide and chloral may be pushed in cases of mental excitement. Objection is taken to chloral because it soon disturbs digestion; but in cases of acute delirious mania, if given with abundance of food and stimulants, it will save many from death.—*London Medical Record*, Nov. 15, 1886.

Natural History of Tuberculosis and the Bacillus Theory.—Dr. R. B. Davy, of Cincinnati, has lately read two papers before the medical societies of that city, in which he thinks he has shown the infectious theory of tuberculosis to be supported in every respect by the natural history of the disease. He does not lay particular stress on the "bacillus tuberculosis," and speaks of the poison more as the "tubercular virus," but insists that, like all other organisms, it is a creature of heat and moisture. From the fact that its appearance and extension are only noticed to occur in confined spaces, and its disappearance most favored in unconfined spaces, he concludes that the danger of infection depends more upon quantity than quality of poison. After extensively discussing the natural history and climatic treatment of the disease, he comes to the following conclusions: 1. That tubercular phthisis occurs most frequently and most fatally in warm or hot regions characterized by a non-porous soil and the ordinary accompaniment of excessive humidity of atmosphere. 2. That it depends upon a specific organism, which can be made to produce the disease by inoculation. 3. That the key to the introduction and development of this organism in the system is ordinarily some form of irritation. 4. That the disease is plainly curable in all its forms except the acute, and even this may not always be fatal. 5. That to the predisposed it is communicable by infection through the medium of a polluted atmosphere. 6. That the infection depends upon quantity rather than quality of virus. 7. That on the open sea, where every condition favoring the development of tuberculosis is present except the tubercular spores, the disease speedily disappears. 8. That the nearest approach to perfect immunity from tuberculosis is to be found on high mountains where, on account of extreme rarefaction and accompanying dryness of the air, the tubercular organism cannot exist.

Diagnosis and Treatment of Tobacco Amblyopia.—Dr. Geo. H. Powers, of California, says: It has been my practice for several years to use inhalations of amyl nitrite in all amblyopia cases, and I have found it of great value, especially (if not exclusively) in the cases of tobacco amblyopia. I believe that it is of great assistance in differential diagnosis, for thus far it has proved that, in progressive atrophy from other causes, no benefit is derived from the exhibition of the amyl, while in tobacco amblyopia vision is immediately and markedly improved.

For instance, a patient presents himself with a history of rapidly failing vision, without pain or inflammation, and examination discovers a dirty grayish hue of the disk, with diminution of circulation, and $S.=\frac{20}{CC}$. Inhalation of a few drops of amyl, pushed only to the point of lively hyperæmia of the face and headache, will cause a decided increase in the circulation in disk and retina, and within five minutes $S.=\frac{20}{XL}$. This evidence that vision is not permanently lost is of great value in fortifying the patient for the abstinence which is necessary to his cure. The sudden improvement is, for the most part, temporary, as, after an hour or so, S. recedes to perhaps $\frac{20}{C}$, but it is not wholly lost, and daily inhalations, combined with tonics and abstinence from tobacco and alcohol, have in my hands proved much more rapidly curative than the strychnine and electrical methods. As the only action of the amyl seems to be to increase the blood supply, it would seem that tobacco amblyopia is due simply to a loss of function from anæmia, which may result in atrophy if long continued.—*Medical News*, Dec. 4, 1886.

Treatment of Chronic Constipation in Children.—Dr. W. B. Cheadle, at the close of a clinical lecture on this subject, points out the disastrous results of mistaken treatment, and shows the necessity of a more rational procedure. "Look at the evil effect of strong purgations—how they enervate

and wear out the tone of the bowel. No occasional purge of rhubarb or scammony is efficient to cure. Look, again, at the evil effect of frequent enemata. Enemata are only to be used on an emergency. They, equally with strong purges, impair tone and do direct harm by actual dilatation. In confirmed cases of constipated habit, treatment must be not intermittent, but continuous; the daily administration of appropriate remedies steadily, for a considerable period, is absolutely essential. Intermittent treatment is abortive, ineffectual, and aggravates the evil. What, then, is the proper treatment for these cases? First, be sure that there is no malformation, no intussusception, no sore about the anus, rendering defecation painful. Then use saline laxatives. Their mode of action is by increasing the flow of secretion rather than by stimulating peristalsis. Thus tone returns when distension is relieved by the easy evacuation of fluid stools. Further aids to this are strychnia, nux vomica, iron and belladonna. They act by increasing muscular tone and nutrition, not by stimulating peristalsis directly. In the case of little children up to two years old simple carbonate of magnesia in milk is sufficient (5 to 10 or 20 gr.); this is better than the piece of soap in the rectum, or the repeated castor oil or manna so constantly advised. In older children the sulphates of magnesia and soda, with the tonics named above, and daily massage with castor oil or cod-liver oil, are most useful. In older children still, a pill of aloes or euonymin, with sulphate of iron and nux vomica, may be given as an alternative to the salts and strychnia, but no frequent rhubarb, or scammony, or podophyllin or jalap (these are for the relief of temporary difficulty only); in mild cases, perhaps, or if the liver is not acting, a dose of calomel, grey powder, and soda, or senna. Regimen is an important element in the treatment if the child should have chronic constipation; abundant water, pure, not hard; "salutaris water" is excellent. In little children add a good infant's food to milk; fruits, fruit jellies, treacle, cooked green vegetables of the softer and more delicate kinds. Some variety in food is useful; a good mixture is better than a monotonous diet. It is, I think, extremely doubtful if coarse food is useful in the long run. It causes atony and weariness of muscle eventually by over-stimulation. And you must insist on regular evacuations. Take care that the stools are not dry and hard, or the child will resist action and increase constipation. Other useful adjuncts are—abundance of fresh air, which aids in improving nutrition; and exercise, which aids the passage of the contents of the intestine down the tube, and improves general health and muscular tone."—*Lancet*, Dec. 11, 1886.

SANTAL OIL IN BLENNORRHAGIA.—DR. LITZEL, of Munich, furnishes (*Allg. Med. Central-Zeitung.*, Nos. 76 and 78, 1886) a somewhat detailed account of his experience of the use of santal oil and essence of copaiba, in the treatment of this troublesome affection. He at first gave this medicine with extract of coffee, but as at least half the patients showed extreme aversion to the drug, gelatine capsules were substituted, two or three capsules, each containing five minims of oleum santali, being taken three times a day. Of ninety-seven patients thus treated, four had gastro-intestinal disturbance; two of these had violent diarrhœa, and the other two severe dyspepsia. Eructations and burning sensations in the stomach were often noticed in the rest, but the drug was persisted with. It should not be given on an empty stomach. One bad symptom, which occurred in five cases out of the whole ninety-seven, consisted in severe congestive pains over the kidneys. Louis Jullien, in his recent work on *Venereal Diseases* (Paris, 1886), speaks of this symptom, also of urticaria, as being not infrequent. Sandal-wood oil is much better tolerated than balsam of copaiba, and if pain in the liver should arise, it suffices to discontinue the drug, and order a warm bath. The use of about thirty minims daily is generally enough to give the urine a distinct odor of the oil. The capsules used were Grimault's (Paris), and Paulcke's (Lepsig). Both these makers sell the pure oil in their capsules. The general indifference and distrust towards sandal-wood oil is apparently due to the fact that owing to its high price, it is extensively adulterated with copaiba balsam and castor oil, so that the commercial oil often contains only a small percentage of the genuine oil. Dr. Hager gives the following test of its purity: "Genuine E. I. sandal-wood oil (.0980 specific gravity) requires, to produce turbidity, from four to five volumes of dilute alcohol of specific gravity .0889, added to a clear mixture of one volume of the oil, and two volumes of absolute alcohol (.0799 specific gravity)." Dragendorf's test is simpler; namely, a solution of one part of bromine in twenty of chloroform. When from ten to fifteen drops of this test are mixed with one of the oil, the color becomes a brownish-violet, and later on dark-blue. The pure oil is clear, light-yellow in color, and very pungent on the tongue; it has a slight odor of copaiba balsm. The results of treatment were these: 1. Given in an early stage, the secretion diminished rapidly, and the pain on micturition ceased. This result happened in thirty-seven out of forty-two cases. 2. If, after ten or twelve days, the oil be discontinued, the old symptoms reappear. 3. The best results were obtained when the oil was commenced in the third or fourth week of the gonorrhœa, together with the use of weak astringent injections. 4. Cystitis. 4. Cystitis and gonorrhœal prostatitis were always greatly benefited by the oil. 5. Cases of gleet did best under local treatment.—*British Medical Journal*, Dec. 4, 1886.

SECONDARY INFECTION THROUGH TYPHOID ULCERS.—SENGER reports a case of a woman who died of typhoid fever, in which he found the following lesions: Vast ulcerations of the lower part of the ileum, colon and rectum; enlargement of the spleen and mesenteric ganglia; recent verrucous endocarditis limited to the mitral valve; tumefaction of the liver and kidneys; and pronounced pulmonary œdema. No bacilli could be found in the ulcerations, but the intestinal mucosa, the mesenteric ganglia, and the tissues near the endocarditis were infiltrated with streptococci.—*Gaz. Méd. de Paris*, No. 49, 1886.

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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A COMPLETE ORGANIZATION OF THE MEDICAL PROFESSION, AND HOW TO ATTAIN IT.

"We want 80,000 doctors enrolled under one Constitution and By-laws believing that their common interests are faithfully looked after by the great central body. Perhaps such a hope is Utopian. But we are sanguine enough to believe that it can be wrought out, and must be if the American profession shall attain the power to which it is entitled."—*American Lancet*, p. 422, for November, 1886.

The above paragraph from an editorial in our valuable contemporary simply expresses the desire to have the entire number of members of the regular profession of medicine in the United States actually enrolled under one general organization, and a degree of confidence that it can be practically accomplished. The idea of such an enrollment or nominal membership of the whole profession under one Constitution and By-laws, to be governed by a comparatively small select Council or Senate, is not new, but was the fundamental idea or principle on which the British Medical Association was founded more than half a century since; the same that shaped the organization of the Massachusetts State Medical Society with its Branch or District Societies; and the same was actively discussed by the Committee appointed in 1846, to report a "Plan of Organization for the American Medical Association." We are satisfied that our *confrère* of the *American Lancet* and all others who will thoroughly study the history and practical results of Medical Society Organizations among all English-speaking people, will become convinced that such a complete enrollment under one organization can never be effected or perpetuated either in Great Britain or the United States of America, except by an Act of Parliament for the one, and an equally imperative law of Congress for the other, enforced by adequate penalties. The probability of the procurememt of such a National law susceptible of practical enforcement, in either country, is too remote to justify its further consideration at present. The development of such a complete organization or literal enrollment under one Constitution, by the voluntary act of the entire membership of the profession, if even attained, would require at least one or two centuries if we may judge by the progress made in the past.

Great Britain, from the comparatively limited extent of her territory and the density of her population, presented conditions much more favorable for the success of such a plan, than our own country. Notwithstanding, the British Medical Association organized with a limited and stable Council for the management of its business affairs, and rules favorable for the formation of Branches in all parts of the country, the members of which thereby become members of Association, has been in existence fifty-four years, and has enrolled as members to this date only about one-half of the members of the profession in England and Wales, Scotland and Ireland, who are legally authorized to practice medicine, surgery and midwifery. With our vast territory divided into between thirty and forty States with no uniform laws regulating either medical education or practice, and not even a general registration of the members of the profession in many of the States, the prospect of bringing them all into actual membership of one organization capable of wielding an united influence, is certainly very remote. While it may be justly deemed impracticable to bring the whole profession of our country into actual voluntary membership of one organization under one constitution, it certainly is not impracticable to so far complete the organization of the profession into municipal, country, district, State and National Associations, on the representative basis, as to give it all the unity and power, with far greater facility of expression, that has ever yet been attained by other methods. A complete organization of the profession on this basis would require the voluntary formation of the regularly educated members of the profession in each county of each State; each State Society should be composed essentially of delegates elected anually by the County Societies in accordance with a uniform ratio of representation; and the National Association should consist of delegates appointed by the State Societies, also in accordance with a uniform ratio of their membership, thus

combining the whole profession in one National representative body, based directly on the State Medical Societies, and indirectly through them, on the municipal and county societies of all the States, in strict accordance with the political institutions of our country, and in harmony with the prevailing habits of thought of our people.

The organization of the American Medical Association commenced in 1846 and completed in 1847, was based essentially on this principle of representation, though imperfectly applied on account of the limited number of county and State Societies then in existence and the diverse organization of such as did exist. But the adoption of the fundamental principle by which the responsible *voting membership* of the National Association was made to consist of direct delegates from local and State societies gave so much impetus to the work of organization of these, that for several years past regular organizations have existed, and have been sending delegates to the National Association in every State, in many of the counties, and all the larger cities of our country. A full investigation will show that during the forty years since the organization of the American Medical Association it has increased its direct constituency in the local, County, District, and State Medical Societies to an aggregate number three times greater than are enrolled as members of the Branches of the British Medical Association resulting from the fifty-four years' existence and work of that great and influential medical body. During the past history of the American Medical Association such improvements have been made from time to time, in the practical application of the principles of its organization, as experience has shown to be necessary, leaving, at present, but few further changes of importance desirable. But the most important work that needs attention, is that of organizing the profession in every county or district where no society yet exists, and the making of those already in existence more full and efficient. To the details of this part of the work and its importance we will give attention in another number of THE JOURNAL.

FERMENTATION, PUTREFACTION, AND SUPPURATION.

Notwithstanding the deluge of matter that has been published of late years in regard to bacteriology, DR. HERMANN KNAPP, in introducing a recent lecture on "Fermentation, Putrefaction and Suppuration" before the New York Academy of Medicine, expressed his conviction that the importance of the subject was not sufficiently appreciated in this country. He quoted a recent opinion of Professor Brieger, of Berlin, to the effect that the great majority of all diseases now seem to be of bacterial origin, and in support of the correctness of this proposition referred to the weekly mortality lists of the various American cities. Thus, during the week ending August 28, 1886, the number of deaths from infectious diseases in New York was set down at 33 per cent. of the total mortality; those from consumption at 16 per cent.; and those from croup and diphtheria at about 5 per cent. Here were nearly 55 per cent. of all deaths attributable to diseases of undoubtedly bacterial origin. In addition, 20 per cent. of the deaths were from diarrhœal diseases, and at least 90 per cent., if not all of them, may be regarded as cases of germ disease. This brings the percentage up to 75 per cent. But such affections as pneumonia, peritonitis, syphilis, gonorrhœa and skin diseases, are not included in the estimate; and if only 10 per cent. of these were classed as of this character, it would increase the present percentage to 85. This is exclusive of surgical diseases in which undue suppuration is caused by microbes; and estimating the mortality from these at 5 per cent., we have a grand total of 90 per cent. of all deaths to be attributed to disease of bacterial origin. It seems, then, that Professor Brieger is right.

Bacteriology has shown its principal fruit in the department of surgery, and there can be no sort of doubt that antisepsis has advanced this branch of medical science to its present high position. Antisepsis, however, is in reality nothing but the practical application of the three words, *fermentation*, *putrefaction*, *suppuration*. Fermentation may be described as the decomposition of carbohydrates through the agency of the yeast-plant; and we may compare the action of the latter to that of the bacteria which are believed to cause putrefaction and suppuration. There are two grades of putrefaction (which is brought about by different kinds of microbes, fifteen or twenty varieties of which have now been discovered); the first grade is met with when there is but little oxygen present; the products being water, carbonic acid and ammonia, and the process of decomposition is attended with little or no offensive odor. The second grade, or putrefaction proper, as generally understood, is seen when there is a larger quantity of oxygen present. Dr. Knapp then discusses the question, whether suppuration and putrefaction are one and the same thing. Surgeons, he said, use the two terms indifferently, and after speaking of the experiments of Recklinghausen and others with the cornea of the frog, he refers to the common assertion

of surgeons that if all germs be excluded, suppuration could not take place. Personally he has investigated three special points in this connection, viz.: 1. Does mere traumatism produce suppuration? 2. Do foreign bodies alone produce suppuration? 3. Do chemical agents of themselves produce suppuration?

In regard to the first inquiry, both in Berlin and at home he has made a number of experiments on the eyes of rabbits. If a wound be made by a perfectly clean instrument, he has found that it will heal by first intention, with no suppuration whatever; but if the wound be made with a contaminated instrument, suppuration invariably results. One of the axioms in antiseptic surgery is that simple fractures never suppurate. It is true that there are rare exceptions to this; but when suppuration does occur, it is always in cases in which some other process of suppuration is present in the body. Whenever the individual is healthy, therefore, no suppuration will take place. In support of this statement may be mentioned the experiments of Becker, who, having made fractures in animals, injected pyogenic fungi into the ear; with the result of at once producing suppuration, although the exciting injury was only a simple fracture. Where no such injections were made the process of repair was never attended with suppuration. Other similar experiments show how ulcerative endocarditis and other suppurative processes can be produced by the introduction into the system of pyogenic organisms.

In regard to the second inquiry, Are foreign bodies by themselves capable of producing suppuration? Dr. Knapp concludes that if they are introduced antiseptically, they will not produce suppuration, and that they may remain indefinitely without giving rise to it. In support of this, he showed a rabbit into one of whose corneæ he had introduced, by means of sterilized instruments, a piece of rusty hair-pin, after having first brought the latter to a glow, in order to destroy any organic matter that might be adherent to it. No suppuration whatever had occurred, although the foreign body had been in the eye for a very considerable time. Into the cornea of the other eye of the same rabbit he had introduced a piece of the same rusty hair-pin which had been dipped in fluid containing pyogenic fungi; and within twenty-four hours a violent phlegmon was set up, which soon completely destroyed the eye. Still, the truth of the proposition that foreign bodies alone will not cause suppuration is not generally admitted, and Pasteur, in 1878, stated that even if foreign bodies be introduced antiseptically, they are capable of producing suppuration. Whether he still adheres to the same view or not, we do not know.

Do chemical agents by themselves produce suppuration? is almost invariably answered in the affirmative. Especially in the case of croton oil is it claimed that suppuration is caused without the intervention of germs. If this exception can stand, however, the whole theory of suppuration, according to the views here taken, must fall to the ground. It is a very difficult question to satisfactorily test in a practical manner; but the solution of the problem has been undertaken by four observers under very strict precautions. The results of these experiments go to show that chemical agents do not of themselves produce suppuration. In repeating some of them Dr. Knapp had much difficulty as regards croton oil, on account of the extreme irritation caused by it. Oil of turpentine, however, is much more manageable. He followed the method of J. Straus in these experiments. On account of the practical impossibility of otherwise completely disinfecting the fur of the animal, he sterilized the skin of a rabbit by means of the actual cautery. Then, having made the injection of the chemical agent under the skin by means of sterilized apparatus, the opening made by the needle was sealed up again by the actual cautery. Some of the experiments were made with a pipette, the opening in the skin through which its point was inserted having been made with a heated knife. With the experiments made with oil of turpentine and croton oil (although there were but five in which the latter was used), suppuration resulted in only 10 per cent of the cases. As a rule, there was coagulation of fibrin, with some necrosis, but no suppuration. In the cases in which suppuration did occur, it was found that there were always germs present, on account of some imperfection in the technique of the experiment. Roice, of Utrecht, has made the same experiments in connection with the anterior chamber of the eye; and this method of procedure has the great advantage of allowing the whole process set up by the chemical agent to be under observation. Dr. Knapp has repeated Roice's experiments, and he also in one instance introduced the chemical agent into the abdominal cavity. No appreciable effect was produced upon the animal, and when, two weeks afterward, it was killed, no pathological changes whatever could be observed at the autopsy.

In Dr. Knapp's experiments upon the eye, inflammation was caused, but no suppuration, even with croton oil; which he finds can be used more satisfactorily when mixed with olive oil, in the proportion of

one to two. In some of the animals operated on the injection was made through the sclerotic. When the same chemical agent (either croton oil or turpentine) was introduced into the other eye in connection with pyogenic fungi, the most violent suppurative inflammation was always produced. He has also made a large number of cultures from the two classes of eyes. From the eyes containing pus, an increased quantity of microbes, with pus, resulted. But microbes (although no pus) were also obtained from the eyes from which pyogenic fungi were excluded; and this is a point that calls for an explanation. The microbes were found not only in the eyes, but also in the kidneys and the blood, though not in the brain. It is evident, therefore, that the system had become infected through the suppurating eye; and the microbes found in the other eye no doubt originated from this source. He therefore made the two classes of experiments in two different series of animals, instead of operating on both the eyes of the same rabbit. When the cultures were now made, no microbes were found to have come from the non-suppurating eyes. These experiments seem to be satisfactory and conclusive. In the eyes into which pyogenic germs were introduced in connection with the chemical agent, suppuration occurred and microbes were found in large numbers; but in the eyes from which such germs were excluded there were neither suppuration nor microbes. The results observed in the latter were merely coagulated fibrin and fibrino-leucocytic exudation. He thinks, therefore, that so far as this whole series of experiments go, we are justified in formulating the proposition that *suppuration is always produced by microbes;* and hence there can be no suppuration without the intervention of these morbific agents.

What, then, is suppuration? First, as in the case of fermentation, the microbe ought to enter into its definition. Fermentation, as has been seen, is the splitting up of a hydro-carbon into simpler forms through the agency of the yeast-plant. Putrefaction, again, is the similar decomposition of a nitrogenous substance through the agency of microbes. Finally, suppuration is likewise the splitting up of a nitrogenous substance, by the same kind of agents. The difference between the two is that in putrefaction, the process is always concerned with dead matter, while suppuration always takes place in living matter.

CENTENNIAL CELEBRATION OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—Full preparations have been made for an interesting and elegant celebration of the Centennial Anniversary of this well-known Society, January 3d and 4th, in Philadelphia.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, Monday, December 6, 1886.

THE PRESIDENT, EDMUND J. DOERING, M.D., IN THE CHAIR.

DR. JOHN A. ROBISON read a paper on the ANTIPYRETIC ACTIONS OF ANTIPYRIN AND THALLIN, in which he had collected and condensed the results of the experiments of a large number of clinicians. The largest number of observers agree that antipyrin is a safe, efficient and unobjectionable antipyretic. Contrary to belief in general it does not have a depressing or debilitating effect on the heart, whereas thallin has. Antipyrin causes no change in the blood, whereas thallin has a deleterious effect on the blood and veins. In conclusion, the author believed antipyrin should always be given to produce a pyrexia in cases where the temperature is excessively high. He does not believe the drug has any influence to lessen or prolong the duration of the continued fevers. He also stated that it not only lowers the temperature, but relieves the pain that accompanies acute articular rheumatism with endocarditis, especially if given with alkalies.

DR. J. J. M. ANGEAR said: I have not given this subject any special study, but the subject of temperature I have, and it may not be amiss to speak of some difficulties which we have to contend against. If radiation is increased or diminished and metabolism remains normal, we have increased or decreased temperature; or if metabolism of the body be increased or diminished and radiation remains normal, then we have increased or decreased temperature. We have no means of arriving at any definite conclusion whether our patient, with increased temperature, is suffering with increased metabolism or decreased radiation, or both. We know from observation and from various experiments that the internal part of the body is very frequently hotter than normal during the cold stage of fever, and cooler than normal during the febrile stage. May not the sum total of caloric in the body be diminished when the thermometer tells us that it is increased, and *vice versa?* If we answer yes, then we are found trying to diminish the temperature, when we should be husbanding what we have. Does not this show that there is a certain amount of pathological knowledge in regard to body temperature which we have not yet arrived at? And our therapeutical knowledge is necessarily as defective in this regard.

Do antipyretics facilitate radiation or check metabolism, or both, or do we know anything about it except its action upon the thermometer? If we could arrive at some definite, pathological conclusion as regards the pyrexial state of the patient, then we could, perhaps, arrive at some scientific knowledge of the action and use of all antipyretics. Had we an instrument by which to measure the amount of radiation and metabolism, it would be of far greater value to us than the thermometer.

DR. C. C. PAOLI said: The paper was well prepared and interesting, but the question arises, do we know anything about the essential nature of fevers? I answer, no. But we know the effect, if we do not know the nature, and in fevers we generally use remedies to lessen the temperature. I have used antipyrin in only eight cases, two of typhoid fever, two of scarlatina, two of lung trouble. In regard to the fever, I admit that the remedy had an antipyretic effect. In two cases the patients vomited as an effect of taking this remedy. I commenced with ten grains, and it diminished the temperature but did not stop the course of the fever, which lasts usually from five to six weeks. One effect I have found from the use of antipyrin, is the lessening of nervous irritability. In a case of tuberculosis, after using antipyrin I began with quinine and found it more of a tonic. In the cases of scarlatina in which I used antipyrin I did not observe any favorable effect; it lessened the temperature, of course, but the same effect was produced by quinine.

DR. H. GRADLE said: Although my line of practice does not often enable me to watch the effects of antipyretic drugs in disease, I can speak of the effect of antipyrin in one disease, viz., the dentition fever of infants; which, although not usually serious, is in a great many instances annoying, and in which, when the fever is high, there is a possible danger of convulsions. I have never heard of any drug that will reduce the fever under these circumstances as promptly and with as little disturbance as antipyrin. With a temperature of 103° a child can be rendered quiet in the course of an hour by one dose of four grains, and perhaps a second dose of two grains, and be pacified for the entire night. I wish to ask the author if he has had any experience in the continued use of thallin in typhoid fever, with the effect of aborting the disease? According to some rather startling statements made several months ago by Ehrlich, it was claimed that it reduced the fever permanently in the course of eight to twelve days.

DR. G. W. WEBSTER favored the use of antipyrin. He had used it in cases of typhoid pneumonia. One point is the favorable action of antipyrin on the headaches of typhoid fever. One of the most distressing symptoms when the temperature is very high is the severe, continued headache and the delirium which always accompanies it. He had not found any other remedy that would have as good an effect in these cases as antipyrin, which always relieved the headache promptly.

DR. H. T. PATRICK said: I am quite partial to antipyrin and have used it in a number of cases. It will often effectually reduce the temperature when baths and sponging will not. In a case of pneumonia in a child of eight years I gave antipyrin from the beginning to the end, with good results, except for one day when I tried sponging instead. The child was sponged off six times in six hours, five to ten minutes each time, without any reduction in temperature. Sometimes cold baths have no effect in reducing the temperature because of a very thick panniculus of adipose tissue. Here antipyrin is indicated. The continuous administration of antipyrin in tuberculosis I have found in a few cases very gratifying. In one case ten to fifteen grains were given every afternoon for a term of ten weeks, with great relief to the patient. His temperature was 103°, and there was prostration and irritability of mind. The antipyrin was a relief to the patient, and to his family on account of the improvement in his disposition.

DR. J. FRANK had had a personal experience with antipyrin, having taken it two years before while suffering with typhoid fever. The temperature ran as high as 106°, and quinine had no effect in reducing it. He took antipyrin in 15 and 30 grain doses, first by mouth and then by rectum, with the effect of rapidly reducing the temperature. He has used it in practice in the treatment of erysipelas and typhoid fever, but does not depend upon it entirely, giving it when the temperature rises very high. In erysipelas he has always found that antipyrin will reduce the temperature.

DR. C. W. LEIGH said: I have seen antipyrin used in a limited number of cases, three or four, of typhoid fever, and none of the patients were older than twenty-one. In these cases there was a visible decrease in temperature and the delirium was lessened very much.

DR. J. A. ROBISON said that he had not pretended to give anything except the results of the observations of a large number of physicians who had used this drug and recorded their experiences. Also the results of quite a number of experiments of therapeutists, as for instance Umbach's experiments in regard to the decrease of tissue waste. I did not try to detail all these different experiments, but attempted to epitomize the well known actions that have been observed of the drugs. Two of these actions, the increase of heat radiation by the dilatation of small blood vessels, and the decrease of oxidation, are the main factors in producing the fall of temperature. Dr. Angear says if we can arrive at some conclusion in regard to the manner in which the drug acts, we can use it. I think we have arrived at a conclusion; these experiments have been carefully conducted and we have seen that antipyrin actually reduces high temperature without any danger to the patient, and it is only in cases where the high temperature itself is a danger to the patient that its use in large doses is to be recommended. In regard to its use in aborting typhoid fever, I have not tried it except in four cases; one was a boy under seventeen and another one fourteen. The temperature was about 103°. I gave large doses and in three days all signs of fever had disappeared. A few days afterwards another member of the same family was taken sick, and the antipyrin was used as before, but that patient went through all the stages of typhoid fever. In another family there were five cases of typhoid fever. Two of the family had had the fever, one of them dying; then three others took sick. Antipyrin was given in large doses in all these cases, but it failed to abort the fever in any of them.

DR. HENRY GRADLE read a paper entitled

DISEASES OF THE VAULT OF THE PHARYNX.

He emphasized the fact that this region is too

much neglected by general practitioners in spite of the importance and curability of some of the diseases occurring there. According to his experience the best examination can be made by means of a large mirror and a palate hook, and this is facilitated by using cocaine when necessary. He gave the history and symptoms of enlargement of the pharyngeal tonsil, which trouble is often called adenoid vegetations, but as usually seem in this country there are no coxcomb-shaped vegetations, it amounts rather to a uniform enlargement of the tonsil at the roof of the pharynx. The condition is of especial importance on account of the liability of ear disease to which it gives rise. Often reflex symptoms are observed like asthma, cough, bronchitis and headache. The tonsil should in every case be removed when enlarged. This can be done by means of the galvano cautery, but it generally requires many sittings and the process is tedious. The quickest way is by means of scoops or sharp curettes according to the plan of Trautman. The hæmorrhage is never alarming and the pain not very great. The result of the operation is always very gratifying to the patient. The pharyngeal tonsil may require treatment even when there is not much enlargement. Sometimes irritation is produced by the presence of white plugs consisting of bacterial masses in the crypts of this gland, which condition can be removed by the galvano cautery. In other instances the glandular tissue forms reddened, tender spots at the junction of the lateral walls and the roof of the pharynx above the Eustachian orifices. This condition may keep up inflammatory ear trouble until removed by the galvano cautery. The speaker further contrasted the relative curability of hypertrophic chronic catarrh of the nasal pharynx with the almost hopeless condition of that form of catarrh, in which no lesions are found on careful inspection. In the hypertrophic form of disease he has found nitrate of silver most serviceable. The form of catarrh in which no lesions of any account are found, has been attributed by Tornwaldt to catarrh localized in a small recess of the mucous membrane in, or just back of the pharyngeal tonsil, known as the bursa pharyngea. The speaker has not been able to verify the existence of this bursa, and considers the pit which is sometimes seen with the rhinoscopic mirror in this region, as a part of the pharyngeal tonsil. He has followed Tornwaldt's directions to cauterize this spot in obstinate cases of catarrh with some little success, but without believing that there is any catarrh limited to this recess. He has seen a few cysts in this locality, but considers them as being formed in the substance of the pharyngeal tonsil and not due to the closure of the alleged bursa pharyngea.

DR. W. E. CASSELBERRY said: I agree with the author on the importance of the pathological states which occur in the naso-pharynx, and I would particularly emphasize the importance of the subject in connection with ear diseases. It is usually neglected because the practitioner does not use the rhinoscope. This can readily be used since the introduction of cocaine; formerly, the pharynx being so irritable, it was a different matter, and considerable practice was necessary in order to acquire the use of the mirror, but now a 2 per cent solution of cocaine sprayed around the pharynx will so reduce the sensibility that the introduction of the rhinoscopic mirror is comparatively easy. I was somewhat surprised at the size of the mirror recommended; usually a small one about one-half inch in diameter is used. This, of course, will not show the entire nasal-pharynx at one time, but it can be easily rotated from side to side. With a large mirror a hook is always necessary, which usually complicates the case and is more apt to gag the patient than the use of a small mirror without the hook. I am accustomed, in considering the diseases of the nasal-pharynx, to divide the inflammatory affections into three classes. First, the simple chronic naso-pharyngitis; second, the hypertrophic naso-pharyngitis, and third, the atrophic naso-pharyngitis. In the first there is a simple inflammation of the mucous membrane and of the connective tissue beneath the membrane, the connective tissue being sometimes involved to such an extent as to form, here and there, thickened areas of infiltration. I think that many of the cases in which the author sees no perceptible lesion in the naso-pharynx can be graded in this class. The hypertrophic form of disease may be sub divided into two classes, one in which the follicular structures are uniformly hypertrophied, the group of follicles constituting the tonsil of Luschka being enlarged and appearing in the rhinoscopic mirror of about the size and configuration of an ordinary tonsil of the throat. And the other sub-class in which the enlargements are pendant, pear-shaped bodies resembling stalactites and hence called the stalactitic form. This is the form which was originally described under the name of adenoid vegetations, and the one which is met with most commonly in Germany, whilst the uniform enlargement is more common in this country. The atrophic naso-pharyngitis, as is the case in the pharynx itself, may be regarded as a later stage of the hypertrophic naso-pharyngitis, although in rare instances it may commence in the atrophic form. During the hypertrophic stage the proliferated connective tissue cells gradually encroach upon the glandular structures, and, so to speak, squeeze them to death, whilst the connective tissue cells themselves, as in cirrhosis of other organs, of the liver, for instance, later contract and atrophy. The mucous membrane is now pallid and thin, and is encrusted over with a dry secretion. This is the form of disease which so often gives rise to fetor of the breath, especially when it involves the naso-pharynx, although the disease is not restricted to that locality. In reference to the treatment there is little to add to what has already been said. I have not employed the curette much as my patients will not tolerate the blood and pain. The pain now is not as great as before the introduction of cocaine, but the blood horrifies the younger patients, and the parents. I have found an equally efficient, although a more lengthy treatment, in the galvano-cautery. It is bloodless and painless. In cases of stalactitic growths the best method is the galvano-cautery snare. For the uniformly enlarged variety I employ a Hemming naso-pharyngeal elec-

trode. Nitrate of silver as a means in the treatment of catarrhal conditions, although it has been greatly abused, is unquestionably effective if properly used. In cases of simple chronic inflammation of the mucous membrane, where there is thickening of the subcutaneous tissue, a strong solution applied by means of the cotton swab, 40 grains to the ounce, used by the physician every day, then every two days and finally twice weekly, will lead to the absorption of the infiltrated material. Strong solutions of nitrate of silver (40 gr. to ℥i) cause absorption of infiltration whilst weak solutions (10 gr. to ℥i) stimulate the further production of infiltrated material and the activity of the glands. Consequently weak solutions will only aggravate the hypertrophic form of disease. For the same reason a week solution will benefit the atrophic form. In reference to the pharyngeal bursa, I am of the opinion that too great importance has been ascribed to it.

Dr. F. O. Stockton said: My experience in the treatment of chronic nasal pharyngitis by the use of nitrate of silver has been anything but pleasing, and I have never seen a beneficial result from it. It is recommended by many in the form of powder, 1 grain of nitrate of silver powdered with some drug and distributed over the membrane, but my experience has been negative. Solutions I have found to be of no benefit whatever. It discolors everything, is a dirty, useless drug, and greatly overestimated. The use of the curette in removing adenoid vegetations is quite a recent thing. The method that the author speaks of I have not tried to any great extent, and I prefer the gouge forceps; I generally use the galvano-cautery, as it is now possible to use it without difficulty with the aid of cocaine, and there being no blood lost is a very important consideration in the treatment of young subjects, because, even if they have no pain, if they see a drop of blood they think they are being killed and begin to scream.

Dr. M. R. Brown said: In regard to the mirror, the size recommended by the author I think rather large, and apt to produce gagging by coming in contact with the pharyngeal walls, but if cocaine is used this may be avoided, and should a mirror about half the diameter of the one shown be employed in posterior rhinoscopy, nine out of ten instead of three out of four cases can be examined at the first visit.

Referring to the pharyngeal tonsil producing bronchitis and cough, the irritating mucus finding its way into the larynx has a great deal to do with producing laryngitis, which will give rise to cough; and the case of bronchitis mentioned by Dr. Gradle was evidently of a reflex nature. After having treated the pharynx with nitrate of silver for any length of time there results a thickening of its mucous membrane; there is absolutely nothing to be gained from the use of this remedy in the conditions mentioned; at least, such has been my experience after having employed it in various strength solutions in the different diseases of the pharynx. I occasionally make use of the cold wire snare, but prefer the galvano-cautery. The gouge or curette I also employ with satisfactory results; but, owing to the pain it causes the patient, have devised a punch forceps, the use of which is attended with less pain than, and is as satisfactory as the gouge.

Of the hypertrophied tonsil receding between the ages of 25 and 30 years, I have seen a number of cases in which the patients with this growth were beyond this age; to-day examined a man 35 years of age, and a short time since removed a similar growth from a male who was over 50 pears old.

Speaking of the microscopic appearance of the naso-pharyngeal growths, Mackenzie says that in adenoid vegetations "the glandular element is, as a rule, more marked in growths taken from the vault of the pharynx, whilst in vegetations taken from the lateral walls the stroma of Kis is found in greater abundance."

Dr. H. Gradle said: As to the size of the mirror, of course where the patient will not permit you to use a large one you will have to use a small one, but where you can use the large mirror, there is an advantage in gaining a full view of everything. In speaking of being able to examine three out of four I referred to patients as they come. As a rule, I do not use cocaine in the first examination, because it is so disagreeable. I do not use the hook where the distance between the posterior wall and the pharynx is considerable. As regards nitrate of silver, there are many conditions in which it is entirely useless. One is the practice of cauterization with the solid stick. I have never done this. But there are certain conditions where nitrate of silver is useful and acts promptly, viz.: chronic hypertrophic catarrh. And it is sure to give relief in the more acute forms of catarrh where the pharyngeal tonsil is not enlarged enough to cause damage, but swells from temporary congestion. The patient can use a preparation of 4 per cent. and apply it himself with a brush, but it is preferable to have the physician use it. The spray, according to my experience, is more effective and not so disagreeable as a dry powder, but it requires considerable care on the part of the physician to avoid staining the clothing.

Dr. F. E. Waxham reported a case of

PSEUDO-MEMBRANOUS LARYNGITIS, TREATED BY ELECTROLYSIS.

(See page 9.)

Dr. W. E. Casselberry said: The report is an extremely interesting one, and I suggest that the experiments be carried further, to ascertain if the galvanic current has any effect in softening the false membrane outside of the body.

Dr. Franklin H. Martin said: I have used electrolysis for about three years in the treatment of strictures of the urethra, stenosis of the uterine canal, chronic inflammatory exudations surrounding the uterus, and in fibroid tumors. In listening to this interesting report the question occurred to me whether the effect of loosening the croupous membrane could be attributed to the electrolytic effect of the current of electricity, or merely to the mechanical effect of the electrode. Electrolysis describes the terms upon which it acts; in the case reported we get no evidence of this action. I should be in-

clined to attribute any beneficial effect that might have occurred to a counter-irritant effect of the positive sponge electrode that was situated externally. In regard to the power of electricity to dissolve substances similar to the exudate found here, I should judge from my experience that it possesses that power. I have been told that a current of electricity passed through a culture of bacteria had the effect of destroying the life of the germ. May this not explain an action that might be worth considering in similar troubles to the one under consideration?

DR. J. FRANK suggested that that if the author had used a weaker current he would have had a better result. In stricture of the urethra five cells of the McIntosh battery, with the fluid reduced one-half with water, are used. Twelve cells could hardly be borne on the skin. It would dissolve the membrane and produce inflammation.

CHICAGO GYNÆCOLOGICAL SOCIETY.

Regular Meeting, Friday, November 19, 1886.

THE PRESIDENT, CHARLES WARRINGTON EARLE, M.D., IN THE CHAIR.

DR. W. W. JAGGARD read a paper entitled

A CASE OF CHRONIC INVERSION OF THE UTERUS, OF TWENTY-ONE MONTHS' STANDING, REDUCED BY COLPEURYSIS.

History.—E. S., 36 years old, German; married at the age of 22 years; seven children, no miscarriages. Her first six confinements were normal. She was in the habit, common among German peasant women, of rising upon the third day and making up her own bed. In each of her labors she was attended by a midwife. Her seventh confinement occurred in October, 1884. According to the statement of the patient and the attendant midwife, the delivery of the child was normal. The placenta was removed, as in the six former labors, by traction on the cord. During the labor and the *puerperium*, no unusual loss of blood was observed, and the patient does not remember any extraordinary sensations of pain or faintness. The midwife consulted a physician on the second day of the lying-in period, with reference to the sudden development of high bodily temperature. On the same day, a well known obstetrician saw the case. He made the diagnosis of puerperal fever, instituted the usual plan of treatment, but declined further connection with the case, as he feared the infection of his regular puerperal patients, of whom he had a large number. No examination of the uterus, either by abdominal palpation or vaginal exploration, was made. On the third day an equally competent practitioner inspected the patient, confirmed the diagnosis of puerperal fever, and gave directions with reference to treatment. The contour of the uterus was not investigated either through the abdominal parietes or by the vagina. He continued to visit the patient for eight days, when he pronounced her convalescent. At the expiration of three weeks the woman rose from her bed for the first time, when she observed a fleshy tumor protruding from the vulva. Seven weeks after delivery she resumed her work as a washerwoman. She suckled her child fourteen months. During this period, painful coitus and the sensation of the presence of a foreign body within the vagina were the only symptoms which attracted her attention to her condition. She noticed no fluor, no hæmorrhage, and felt no pain except during coitus. The sexual act was not attended by any perceptible loss of blood. On account of the two symptoms mentioned she sought medical advice. The fleshy mass, situated entirely within the vagina, was supported by a large sponge.

The child was weaned in December, 1885. About March 17, 1886, she experienced severe metrostaxis, entirely without pain, and lasting six days. She supposed menstruation had been reëstablished and gave the subject no further thought. About April 15 another severe hæmorrhage occurred, painless and lasting one week. On May 28 she came under the writer's observation, and was admitted into the wards of Mercy Hospital. She sought relief, as she very distinctly expressed it, on account of painful coitus, the sensation of the presence of a foreign body within the vagina, and the excessive loss of blood during her last two menstrual periods. The woman was of medium size and height, with well developed muscles and clavicles like a man's. She presented evidence of marked anæmia.

Diagnosis.—Bimanual palpation revealed a pyriform tumor, the size of a hen's egg, protruding through the *os uteri*. The base of the tumor rested upon the pelvic floor, and upon coughing or straining appeared at the genital fissure. A shallow sulcus between the pedicle of the tumor and the walls of the cervical canal, extending around the left semicircumference of the canal, could be felt by the finger and traced with the sound. On the right side, no sulcus could be detected, and the membrane covering the tumor was reflected directly upon the external os. The long axis of the tumor was deflected to the left of the median line. The *corpus uteri* was absent from the normal position. The tumor, insensitive to pressure, was covered by a soft, villous membrane, and possessed the consistence of an œdematous myoma. The enveloping membrane was of a bluish-red color, presenting some spots of superficial ulceration, and bled upon the slightest touch. Tubal ostia were nowhere visible. Traction of the tumor downwards caused the sulcus on the left side to disappear entirely. An important diagnostic sign of inversion of the uterus, to which Carl Braun, Robert Barnes and Schroeder in particular have called attention. Reamy, of Cincinnati, has recently described a sign which might have furnished corroborative evidence at this stage of the diagnosis in the case under consideration. Reamy says that when the tumor, grasped by the fingers within the vagina, can be easily rotated on its vertical axis, it is probably a polyp, since such rotation could not occur to any marked extent in an inverted uterus, stiffened as it is by its muscular walls and the thick, strong, fibrous guy ropes furnished by the broad ligaments.

To make the differential diagnosis between inversion of the uterus and a pedunculated fibroid, positive, the patient was etherized. A sound in the bladder and a finger in the rectum were easily approximated above the tumor. The funnel-shaped cavity at the seat of inversion was easily recognized by the finger in the rectum, and by the hand on the abdomen in bimanual palpation.

No appearances were present that would indicate the invasion of the uterine walls by any new formation.

Treatment.—The patient was etherized, the contents of the rectum and bladder were evacuated, and the genitalia disinfected. The right hand was passed into the vagina, "and with the fingers and thumb encircling the portion of the body close to the seat of the inversion, the fundus was allowed to rest in the palm of the hand. This portion of the body was firmly grasped and pushed upward, and the fingers were then immediately separated to their utmost; at the same time the other hand was employed over the abdomen in the attempt to roll out the parts forming the ring, by sliding the abdominal parietes over its edge." At the expiration of forty-five minutes, the writer's hand was almost powerless, and Dr. E. C. Dudley kindly relieved him. Dr. Dudley gave up the attempt at reduction after thirty minutes' trial, fearing perforation of the fundus. Apparently not the slightest progress in the inversion of the organ had been made. Some hæmorrhage occurred as the result of manipulation, although the fundus had been enveloped with absorbent cotton and gauze. The manœuvre was repeated on the following day, under the same conditions, through the same period of time, with no more favorable result.

Emmet's method was then abandoned for the following reasons: The separation of the fingers to their utmost had no effect whatever in the dilatation of the *os externum.* As pointed out by Fenger, and as brief reflection will convince the most casual observer, mere extension of the fingers can have but little effect in the dilatation of the cervix, owing to the relatively feeble character of the extensor muscles of the forearm. The necessary manipulation of the congested *mucosa*, even when protected by cotton or gauze, caused a loss of blood of moment in an already anæmic woman. The uterine musculature had evidently undergone fatty degeneration, and there was serious danger of perforation. Finally, there was reason to entertain fear as to the patient's power to endure the shock from taxis, and the effect of prolonged anæsthesia.

Compression of the body of the uterus opposite to each tubal ostium, between the thumb and forefinger, so as to produce indentation of one side or the other—the Kiwisch-Noeggerath method—was equally ineffectual.

On Sunday, May 30, at the suggestion of Dr. W. H. Byford and Dr. Christian Fenger, the writer began an attempt to effect reinversion by colpeurysis. After the evacuation of the contents of the bladder and rectum, and disinfection of the genital canal, the colpeurynter was introduced while empty, so that it lay on the posterior wall of the vagina, and the *fundus uteri* was adjusted so that the long axis of the uterus and the axis of the pelvic inlet were coincident. The bag was then injected with water until it was fully distended. The patient was placed in bed in the dorsal decubitus. The instrument was removed at the expiration of twenty-four hours, and the genital canal disinfected. A bacillus containing 30 grains of iodoform was placed in the vaginal culde-sac, and the colpeurynter, after being cleansed, was reintroduced. Colpeurysis was continued in the manner indicated without interruption until June 9. Very gradually the sulcus between the pedicle of the tumor and the neck of the uterus deepened, until on the eleventh day the organ was so far reinverted that the fundus was on the same plane with the *os externum.* During this period gentle efforts at taxis were made daily, but without any apparent effect. No perceptible progress was made during the succeeding eight days. June 17, a serous fluid tinged with blood began to escape from the vagina, and it was thought the patient was about to menstruate. The colpeurynter was accordingly withdrawn.

During the nights of June 18 and 21 the patient suffered severe uterine hæmorrhages which threatened to prove immediately fatal. Hot vinegar was used as a vaginal douche, but did not prove so efficient a styptic as a hot saturated solution of alum. Menstruation ceased on June 23. On account of the hæmorrhages, it was deemed inexpedient to expose the patient to the fatigue consequent upon any attempt to observe the *mucosa* during menstruation. During the subsequent nine days the writer was indisposed, so that the treatment by colpeurysis was resumed on July 2. On examination, before replacing the bag, the inversion was found to be as complete and as irreducible as the day on which the treatment began. The uterus was gradually inverted, as before, until on July 8 the fundus was on the same plane with the *os externum.* From the 8th until the 10th of July no apparent progress was made in reduction. On the evening of July 16 the writer was very much pleased to find the uterus completely reinverted, and the vaginal portion of the cervix occupying its normal position. The sound passed into the uterus to the extent of 3½ inches. The *corpus uteri* was felt on bimanual palpation, in a position of slight retroversion, below the promontory of the sacrum. The patient was not aware of any change in her condition. She said, however, that she had felt a sudden, sharp pain in the hypogastric region some four hours previous to the examination. Owing to the patient's enfeebled condition—due in the main part to anæmia—she was not permitted to leave her bed until July 18.

The colpeurynter was in the vagina altogether thirty-three days. On three occasions during this period the bodily temperature rose to 102° F., but invariably fell to the normal after irrigation of the vagina and disinfection of the rubber bag. The presence of the colpeurynter in the vagina did not interfere at all with the functions of urination and defecation. The writer desired to express in words his appreciation of the constant attention devoted to the somewhat tedious plan of treatment, by Dr. Louis E. Lawson, late Resident Physician, Mercy Hospital.

Dr. Alex. J. Stone, of St. Paul, kindly repaired the bilateral laceration of the cervix, on July 20. The operation was unusually difficult on account of the extent of the tear, and the shortness of the vaginal portion. Dr. Stone's method of operative procedure differs materially from Emmet's, but its description is obviously out of place in the present report. The sutures were removed on August 4, perfect union having been secured.

The patient, after leaving the hospital, gained rapidly in strength. Menstruation occurred September 26; the process was painless, lasted four days, and the quantity of blood lost was normal. At the time of writing she had resumed her former occupation.

Remarks.—The case is of particular interest with reference to 1, anatomy; 2, symptoms, and 3, treatment.

1. *Anatomy.*—The uterus was in a state intermediate between the second and third degree of inversion. In the second degree of inversion—the incomplete inversion of Puzos, Levret, Leroux, Donnce, the third degree, or perversion of Crosse—the anatomical limit of inversion has been indicated by Baudelocque as the vaginal insertion around the *cervix uteri.* Under these conditions, according to Veit and Freund, the cervical canal is intact, the uterus is only inverted as far as the internal os, and the uterine globe remains within the vagina. In the third degree, the complete inversion of Puzos, Levret, Leroux, the utero vaginal inversion of Donnce, the *corpus uteri* and *cervix uteri* are completely inverted, and the anatomical limit as indicated by Levret, is the vaginal insertion at the vulvar orifice. Under these conditions, the inverted uterus is also prolapsed and protrudes beyond the place of the genital fissure.

In the case under consideration, the cervical canal was completely inverted on the right side, the cervico-uterine sulcus (Donnce) had disappeared, the cervico-vaginal sulcus was shallow. On the left side, the cervico-uterine and cervico-vaginal sulci were perfectly distinct. In consequence of the complete inversion of the right half of the cervix, the long axis of the uterine globe was sensibly deflected to the left of the median line. The vaginal portion of the cervix was short, and lacerated on either side to the vaginal junction. The inverted uterus was perfectly mobile, and no trace of inflammatory infiltra- could be detected about the pelvic peritoneum or in the connective tissue. The position of the ovaries, tubes and round ligaments could not be mapped out with any degree or certainty.

2. *Symptoms.*—The writer thought it was fair to assume that the inversion of the uterus, in the case under discussion, occurred at the time of delivery. The weight of probable evidence is in favor of this assumption. The inversion must have occurred before the third week following labor, because at that time the presence of an intra-vaginal tumor was discovered by the patient. This interval of three weeks was spent quietly in bed in the dorsal decubitus. The condition for inversion would be at no time during this period so favorable as during or at the completion of the third stage of labor. During this period no cause adequate to the result was in operation. On the other hand, during or at the completion of the third stage of labor, all the causes and conditions known to be necessary to the production of inversion were present, *i. e.*, the enlarged and relaxed corpus, dilated cervix, traction on the cord, possibly, also fundal insertion of the placenta (Hennig), and paralysis of the placental site (Rokitansky). If this assumption be granted, the case demonstrates that inversion of the uterus may "take place without sufficient symptoms to attract attention or to indicate that anything has gone wrong." Dr. J. C. Reeve has already called attention to this subject, and has sustained the proposition just quoted, by the citation of well anthenticated cases, in his classical essay, "Moot points in Regard to Inversion of the Uterus."

The patient, a woman of at least average intelligence, and the midwife, a "qualified" practitioner, *i. e.*, examined and registered by the State Board of Health of Illinois, observed no symptoms sufficient to attract attention or to indicate that anything unusual had happened at the time of delivery. A well-known and skilful obstetrician saw the case forty-eight hours after the probable time of the occurrence of the accident, and the absence of symptoms was so marked that the condition escaped his critical observation. Seventy-two hours after the probable time of occurrence of the accident the patient was seen by another thoroughly competent medical man, who also failed to recognize the complication upon his first, or upon any subsequent visit.

Dr. Reeve's proposition has an important bearing upon the differential diagnosis between inversion of the uterus and sessile polypus, and indicate that no reliable evidence can be obtained from the history of the case.

3. *Treatment.*—Carl Braun, in 1851, introduced a simple, convenient and safe method of the vaginal tamponade (colpeurysis) by means of a caoutchouc bag (colpeurynter). The reduction of chronic inversion of the uterus by colpeurysis was inaugurated by a communication from Tyler Smith to the Royal Medical and Surgical Society of London, April 13, 1858. In this communication Tyler Smith reports the reduction of a chronic inverted uterus by taxis in connection with continuous elastic pressure by means of Gariel's air-pessary. Barrior, of Lyons, in 1852 employed an air-pessary to retain the uterus in position, but with no avowed intention of using continuous elastic pressure to effect reduction, as intimated by Donnce. M. P. Teale, Jr., of Leeds, and West effected reductions of the inverted uterus in 1859 by Tyler Smith's method. It was reserved for Sockenthal, as remarked by Thomas, to demonstrate in the same year that reduction could be effected by the colpeurynter unaided by taxis.

As a matter of practical import, the colpeurynter used in the case described was a quadrilateral, caoutchouc bag, 10 cm. long, 3 cm. wide when collapsed, and possessing a maximum circumference of 21 cm. when distended. It is known in the shops as "No. 5 pear-shaped watery-pessary." The selection of a properly shaped and properly sized instrument demands some care. Dr. Byford's treatise is the only

American textbook on gynæcology which gives an adequate exposition of colpeurysis as one of the methods of reduction of chronic inversion of the uterus. This fact may be interpreted as indicating the method is not extensively practiced in the United States, and a survey of American medical literature upon this subject will serve to confirm such an opinion. In the very large majority of cases more heroic measures have been adopted. On the other hand, colpeurysis has largely replaced all other modes of treatment in Germany. Fritsch says, "Gradually almost all gynæcologists have gone over to Braun's colpeurynter." "The treatment with the colpeurynter is the sovereign method of treatment in cases of inversion of the uterus. Inversions yield to it which have resisted all other methods. The resistance which the cervix opposes may be so great that Muzcaux (four) forceps inserted into the portico tear out, and still the uterus remains unmoved. If colpeurysis is now resorted to, earlier or later a successful result is bound to follow without danger. It is therefore urgently advised to give up every attempt at forcible reposition of the uterus." He adds the significant sentence, "Colpeurysis cannot be held as without effect, even if the end is not immediately attained, it may be continued with interruptions fourteen days, yes, even three weeks." The best method of treatment of chronic inversions," says Rheinstaedtor, "is the introduction of a colpeurynter, which is gradually distended with water." Schroeder has repeatedly effected the reduction of the chronic inverted uterus after the failure of all efforts at manual reposition.

(*To be concluded.*)

FOREIGN CORRESPONDENCE

LETTER FROM PARIS.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Gout—Renal Lithiasis—Pathogeny of Renal Congestion—Bright's Disease without Œdema and Albuminuria.

In a very interesting paper by Dr. Lecorché, on the *Treatment of Gout*, the author divides the therapeutics of this affection into two distinct parts: 1. The treatment of the gouty subject in the intervals of the attacks, which he considers the only important and truly fruitful part of the treatment. 2. The treatment of the attack. After having thoroughly studied the subject, both theoretically and clinically, and after having carefully studied the influence of the so-called anti-gouty substances commonly in use, from the various mineral waters to the preparations of colchicum and of the salts of lithia, Dr. Lecorché formulates his conclusions as follows: If there be any specific in medicine, colchicum and the salicylate of soda may be considered such for gout and its manifestations; the former reduces the proportion of lithic acid in the blood, while the latter favors its elimination.

One of the causes of the non-success of these drugs in certain cases, is the extreme reserve with which they are too frequently administered; they then do more harm than good. The author concedes to Professor Germain Sèe the credit of having been the first to employ the salicylate of soda against gout, and had brought out the advantages of this substance in the multiple indications of this affection, in which it is utilized for the analgetic power of the medicine, its decongestive or resolving property, and for its power of eliminating lithic acid in certain cases. In fine, the faculty of using, in part, the glycocol, which constitutes one of the most important albuminoid substances. The conclusion of Dr. Lecorché is that the physician should intervene in all cases of gout: 1. By the aid of diet to prevent the gouty diathesis. 2. By the aid of diet and of alkalies to combat the diathesis and to prevent the attack of gout. 3. By the aid of specifics, colchicum and the salicylate of soda, in the generality of cases, to combat the attack of articular or visceral gout.

In connection with the treatment of gout, it may be interesting to learn what Professor Jaccoud says on the subject. He, too, lays great stress on treatment in the intervals between attacks, or, if individuals of a gouty diathesis, temperance in all things, and regularity in the hours of repasts and those devoted to sleep being his fundamental precepts. The diet should be mixed, but more vegetable than animal. Highly nitrogenous substances, such as game, crustacæ and sea-fish, should be avoided. Pure water should be the general drink, or if this be not well tolerated, a little white or red wine may be added thereto, or a little weak beer may be allowed. The gouty subject should go to bed early and rise early, and take daily moderate exercise. This treatment should be followed during the whole life, and as a complement to the above, Dr. Jaccoud prescribes that in spring and autumn a course of butter-milk should be gone through. Should these hygienic measures not be sufficient to modify the economy and to rid the patient of the divers gouty manifestations, therapeutic agents must be resorted to. These consist of the daily use of alkaline waters, the benzoate of lithia, in doses of from 10 centigrammes to 1 gramme per day. The bowels should be kept freely moved by small doses of some saline aperient, the best for the purpose being Carlsbad salts, which has the advantage over the other purgatives of having the faculty of increasing the urinary secretion, whereas with most others it becomes scanty and loaded with sediment. A season or two at some of the following watering places would act as powerful adjuvants to the routine treatment: Ems, Royat, Kissengen, Homburg, will be found best suited for the articular disorders which remain after gouty attacks.

For manifestations of renal lithiasis the patient should be sent to Coutrexéville, Evian, Martigny (Vosges), and Vittel. Finally, the waters of Ragatz are best adapted for gouty patients in whom the malady has been of long standing, and who are weak and in a cachectic condition. The treatment during the attack consists in enveloping the joints with cotton wool, narcotic liniments, low diet, or rather

one which must be modified according as the patient is febrile or apyretic. The best article of diet at such time would be milk. The bowels must be kept free, not, however, by strong purgatives. Thus it may be seen that Professor Jaccoud is in favor of the "expectant" mode of treatment during an attack of gout, and it is only when the pains are exceptionally severe, or when the fit is of abnormal duration, that he could prescribe the salicylate of soda (3 grammes per day), or the wine of colchicum in doses of from 5 to 6 grammes in the twenty-four hours.

At a recent meeting of the Medical Society of Hospitals, Dr. Albert Robin read a paper on the *Pathogeny of Congestion of the Kidney*. From two cases which came under his own observation, he was induced to conclude that cold excites the reflex action of these organs, which then refuse to let pass the waste tissues of the organism. These, not being eliminated, poison the patient in different degrees, according to the duration of the suppression of the functions of the kidneys.

At the same meeting Dr. Dieulafoy made some observations on cases that came under his notice, exhibiting all the symptoms of Bright's disease minus œdema and albuminuria. The autopsy confirmed the diagnosis that was made during life.

In one case, that of a man 63 years of age, and who had not been alcoholic or syphilitic, the autopsy showed a typical form of arterio-sclerotic nephritis. The heart was small and sclerotic, with notable atrophy of the muscular tissue. With reference to these cases Dr. Dieulafoy dwelt on the fact that there is no strict correlation between albuminuria and Bright's disease. There are some symptoms, however, which will enable us to recognize the renal lesion. These consist chiefly in the troubles of the urinary secretion, and above all pollakiuria, or necessity of frequent micturition during the night, cephalalgia, oppression, occular disturbances, auditory troubles (deafness, rumbling), the sensation of "doight morts," or numbness in the fingers, which latter the author considers pathognomonic. He referred also to Professor Bouchard's test, according to which, the secretion of urine being a process of depuration, it may be conceived that if the kidneys work badly, the urine which they excrete, not containing all the ordinary products of elimination, will be less poisonous than normal urine, which fact has been verified by experiments on animals. For instance, while in the normal state, 15 to 20 grammes of urine suffice to kill a rabbit, it would take 250 to 300 grammes of Brightic urine to produce the same effect. It is precisely this last circumstance which is found in Bright's disease, and which, in certain exceptional cases can, even in the absence of albuminuria, establish the diagnosis of nephritis. In the cases which came under Dr. Dieulafoy's notice the different varieties of albumen were very carefully sought for, even those which are not revealed by the ordinary tests. A. B.

DOMESTIC CORRESPONDENCE

THE MEDICAL SERVICE OF THE U. S. PENSION BUREAU.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—I have been much interested in a communication which appeared in THE JOURNAL for November 20, entitled "The Medical Service of the U. S. Pension Bureau," and written by Dr. P. S. Conner, of Cincinnati. Briefly stated, the article referred to is simply an arraignment of the Pension Examining Boards, as at present constituted, virtually charging the members thereof with professional incompetency, and proposing as a specific for the evils complained of, that the entire business of the examining of pensioners, and applicants for pensions, be transferred to the Medical Corps of the Army. After detailing at length the duties of the examiners, Dr. Conner says: "Even the most hurried glance at what is required of an examining surgeon, will suffice to show that he ought to be well educated, experienced in the detection of pathological conditions, of good judgment, honest, and independent, having regard solely to what is right and just to the applicant on the one hand, and the Government on the other."

Thus, basing his plea for the charge above referred to, upon the assumed fact that the Boards, as at present constituted, are destitute of the qualifications which he mentions—in other words, that they are composed of physicians who are *not* well educated, *not* experienced in the detection of pathological conditions, *not* of good judgment, honest, and independent, etc. Now, upon all these points, I take direct issue with Dr. Conner, and express the belief that he cannot make good any of the propositions which he advances. From a personal knowledge of the make-up of several Boards of Pension Examiners, the writer believes that they are composed of a class of physicians who, as a rule, will not in the least suffer by comparison with a like number of the medical officers of the Army, in all that relates to education, experience, and in the possession of the various qualifications necessary for thorough and impartial examinations. The Pension Examining Boards are, in the main, composed of the best medical talent in the various cities and towns wherein the Boards are located. A very considerable number of their members are men who have had a large experience as Army surgeons during the late war, and who have made high reputations in long and successful professional careers. The Boards, as a rule, are thoroughly equipped with all the various aids to diagnosis which the inventive genius of the profession is continually giving to the world.

The competitive examination, which Dr. Conner states is a requisite to membership in the Medical Corps of the Army, has by no means succeeded in placing that Corps upon so high a plane as our author would have us believe, for it is a well-known fact that these examinations are not, never have been, and in the nature of things never can be, wholly freed from personal and political influences. It is

not the purpose of the writer to belittle or to misrepresent the Medical Corps of the Army. That body is doubtless composed, in the main, of men of a good degree of professional ability; men competent to discharge, intelligently and well, the duties devolving upon them; but I desire simply to show that the comparison which Dr. Conner institutes is not warranted by facts. It is, however, true, that just as the "West Pointer" was, during the late war, disposed to arrogate unto himself all military knowledge, so was the regular army surgeon disposed to put on airs over the volunteer surgeon; but that this assumed superiority was groundless, the writer, as well as many others, had ample opportunity for observing. In field, or in post hospital, no better work was done than by the volunteer surgeon.

But I have not yet mentioned all the beneficent results which Dr. Conner is confident would ensue, both to the Government and to the pensioner, should his plan be adopted. He says that, as a result of the adoption of his scheme, "deserving applicants would get *what they deserve*, and the ratings would be far more uniform than at present." To this I reply, that deserving applicants, as a rule, now get what they deserve, and in regard to the uniformity of ratings, what reason have we to doubt that as great a diversity of opinion would exist among the Army surgeons as now exists. Dr. Conner says further: "There would be no more complaints or charges that pensions were recommended or advised against because of the applicant's connection with this or that political party." To this we reply, that not many complaints of this nature have been made, and these, no doubt, for the most part groundless. Yet surely, the surgeons of the Army are members of some political party, and there is no earthly reason why they would not be just as susceptible to political influences as are the present examiners.

Dr. Conner also informs us that, under his plan, "the end results of excisions and of amputations might be determined, as *they now cannot be!*" The italics, and exclamation point, are mine. Also, he says further: "The Government would be benefited, meritorious soldiers and sailors *in some degree rewarded* for privations, sickness, wounds," etc., but this is enough. He also states, and truly, that the establishment of such a board as he advocates was, at one time, strongly advocated by the authorities of the Pension Bureau. He might have stated further, that the measure failed, because the debate thereon in Congress completely demonstrated the utter impracticability of the measure, and also during that discussion, the present system of pension examinations was warmly endorsed for its thoroughness and efficiency, by leading members of both houses of Congress, and of both political parties.

The plan proposed by Dr. Conner would give us one pension examiner where there are now about thirty, an average of about one Board to a State. Under this management, it is hardly necessary to state that thousands of pensioners could not afford the time and money necessary to reach the Board, while under the present arrangement, few need to be absent from home over night in order to reach some Board of Examiners; while should the Government, as Dr. Conner suggests, undertake to pay their traveling expenses, the present cost to the Government would be greatly increased, while there is not the remotest ground for believing that any compensating good could result, in the way of increased thoroughness or efficiency of the examinations. I am, very truly,

L. BROWN, M.D.

Postville, Iowa, Dec. 1, 1886.

BOOK REVIEWS.

THE PHYSICIAN'S VISITING LIST (LINDSAY AND BLAKISTON'S) FOR 1887. Philadelphia: P. Blakiston, Son & Co. Chicago: W. T. Keener.

This "Visiting List" is now in its thirty-sixth year of publication, and is so well known to the profession that but little need be said of it. It is published in several sizes, for 25, 50, 75 and 100 patients weekly, at prices ranging from $1.00 to $3.00, the latter price being for large lists in two volumes (January to June, and July to December). A perpetual edition is also published, and an interleaved edition at a moderately increased price. It contains calendars for 1887 and 1888, Marshall Hall's "ready method in asphyxia," a table of poisons and antidotes, tables of the metric system, a dose table rewritten to accord with the sixth revision of the U. S. Pharmacopœia, a table of disinfectants, directions for the examination of urine, a table of standard reference books, table of incompatibles, a new table for computing the period of utero-gestation, a list of new remedies for 1886–7, Sylvester's method for artificial respiration, and a diagram of the chest, besides the blank leaves for visiting list, monthly memoranda, addresses of patients, nurses and others, of accounts rendered, memoranda of wants, obstetric and vaccination engagements, record of births and deaths, and cash account.

MISCELLANEOUS.

PROF. KOLOMNIN'S SUICIDE AFTER A FATAL OPERATION.—Professor Kolomnin, of St. Petersburg, recently committed suicide after the death of a patient from cocaine. The patient, says the *British Medical Journal*, who was operated on was a young woman who had been sent from the medical out-patient department into the surgical wards. Professor Kolomnin found a large ulcer of the rectum, which he believed to be of a tuberculous nature; he decided to scrape and cauterize it. Proposing to employ cocaine as an anæsthetic, he made a number of inquiries as to the maximum dose, and looked up the literature of the subject, which comprised about thirty cases, in which from 6 to 90 grains (the Russian grain = 1.0417 grain English), had been employed. Most of these cases were operations for crushing urinary calculi, and though the bladder, if healthy, is

known to be quite unable to absorb such a quantity of the drug, in some cases vesical disease was present, and in these absorption must have occurred. Again, Professor Dieulafoy had employed 48 grains of cocaine in a rectal operation with success. Having regard to all these reported facts, Professor Kolomnin thought himself justified in disregarding the opinion of his colleague, the Professor of Pharmacology, who said he considered two grains a maximum dose. He, however, decided to give rather less than half the quantity used by the French professor, and to administer it in four rectal injections. After the third of these, it was found that anæsthesia had not been produced, so Professor Kolomnin introduced a speculum, touched the surface of the ulcer with a dry sponge, and gave another injection, which produced anæsthesia, though not of a very complete character. The ulcer was scraped, and an oiled plug left in contact with it. The pulse was then somewhat rapid. Forty-five minutes afterwards the pulse became greatly enfeebled, and the respiration labored, the face and hands assuming a livid appearance. Everything was tried without avail—faradization, artificial respiration, subcutaneous ether injections, ammonia, stimulating and nutrient enemata, and even tracheotomy, with inhalation of oxygen—death being evidently due to the toxic action of cocaine. In some quarters Pr fessor Kolomnin was much censured, but he himself considered that, with all the authority of numerous reported cases, he was not to blame for using the quantity of cocaine that he did. He, however, fancied that he had made an error in diagnosing the ulcer as of a tuberculous nature, and worried himself about having undertaken the operation. As to his own personal condition, he had lived for some years a most secluded life, devoting himself entirely to his scientific wark, and making no intimate friends. He had latterly complained of palpitation and sleeplessness, and had become very irritable and, in some instances, forgetful, so that there is no doubt in his eminent colleague's mind that when he committed suicide he was not really aware of the gravity of what he was doing. The day before he had gone to Professor Botkin to ask him to give an address at a medical society for him, as he felt too unhinged to do it. This request was complied with, his own death serving, alas! as the subject.

ACCOUCHEMENT DURING HYPNOTIC SLEEP.—In the *Wiener Med. Wochenschrift* a case is mentioned of a woman whom Dr. C. Braun succeeded in rendering unconscious during labor by throwing her into a condition of hypnotic sleep; the uterine contractions were particularly painful. They were equally violent during the period of unconsciousness, but the intervals were somewhat longer; dilatation of the passages took place in the most satisfactory manner, and delivery was speedly accomplished. The placenta was expelled into the vagina, and was easily withdrawn with the hand. On awakening, the patient did not complain of pain, and afterwards slept naturally for several hours. One of the most interesting features of the case was that the uterine contractions induced contraction of the abdominal muscles without awakening the patient. Hæmorrhage was very slight.—*British Medical Journal*, Dec. 11, 1886.

THE PASTEUR INSTITUTE.—M. Pasteur states that the amount subscribed to the proposed Institute now amounts to almost 1,800,000 francs, and that contributions still continue to come in. English brewers, who have been shown that they are indebted to Pasteur for his experiments on ferments, have contributed largely.

EULYLYPTOL is the name given by Dr. Schmeltz to a mixture containing six parts of salicylic acid to one part of carbolic acid and eucalyptol, and which he considers a better antiseptic than iodoform, corrosive sublimate or carbolic acid. A small quantity added to urine will preserve it for months.

CHOLERA IN EUROPE.—Several deaths from cholera have recently occurred in Bulgaria. The disease originated, it is said, with a Hungarian peasant bringing clothes with him of a man who had died of cholera. Cholera has reappeared at Gorizia.

A HEALTH EXHIBITION IN WARSAW will be held in May and June, 1887. The exhibits will be chiefly Polish, but foreign goods will not be excluded.

THE U. S. LIFE-SAVING Service has saved, from its establishment in 1881 to July 1, 1886, 28,317 persons.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 18, 1886, TO DECEMBER 24, 1886.

Major W. H. Forwood, Surgeon, granted leave of absence for one month. S. O. 129, Dept. Dak., Dec. 16, 1886.

Capt. J. V. Lauderdale, Asst. Surgeon, ordered from Ft. Concho to Ft. Clark, Texas. S. O. 174, Dept. Texas, Dec. 16, 1886.

First Lieut. Edward Everts, Asst. Surgeon, ordered from Ft. Grant to Ft. Apache.

First Lieut. Chas. F. Mason, Asst. Surgeon, ordered from Ft. Huachuca to Ft. McDowell.

First Lieut. W. B. Banister, Asst. Surgeon, ordered from Ft. Wingate to Ft. Lowell.

First Lieut. W. D. Dietz, Asst. Surgeon, ordered from Ft. Stanton to Ft. Bayard. S. O. 136, Dept. Ariz., Dec. 16, 1886.

First Lieut. A. S. Polhemus, Asst. Surgeon, ordered for duty as Post Surgeon at Ft. Gaston, Cal., relieving First Lieut. H. I. Raymond, Asst. Surgeon, ordered for duty at Angel Island, Cal. S. O. 123, Dept. Cal., Dec. 13, 1886.

First Lieut. C. L. G. Anderson, Asst. Surgeon, temporarily to duty at Whipple Bks., Arizona. S. O. 132, Dept. Ariz., Dec. 7, 1886.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDED DECEMBER 18, 1886.

Banks, C. E., P. A. Surgeon, granted leave of absence for twelve days. Dec. 16, 1886.

Carrington, P. M., Asst. Surgeon, granted leave of absence for fifteen days. Dec. 6, 1886.

Williams, L. L., Asst. Surgeon, upon expiration of leave, to proceed to Boston, Mass., for duty. Dec. 17, 1886.